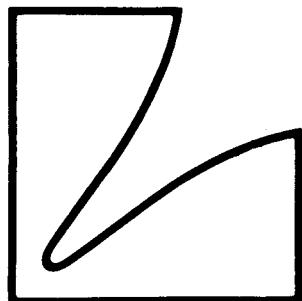
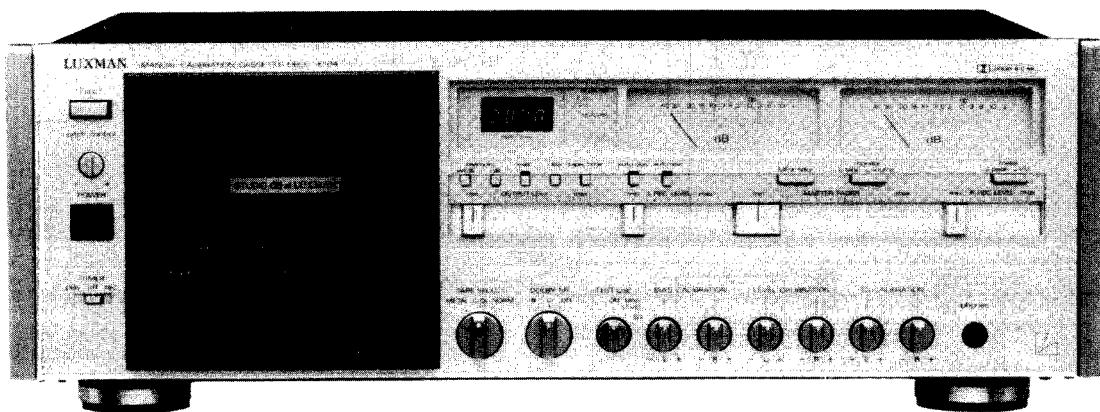


# SERVICE MANUAL



LUXMAN STEREO CASSETTE DECK  
**K-04**

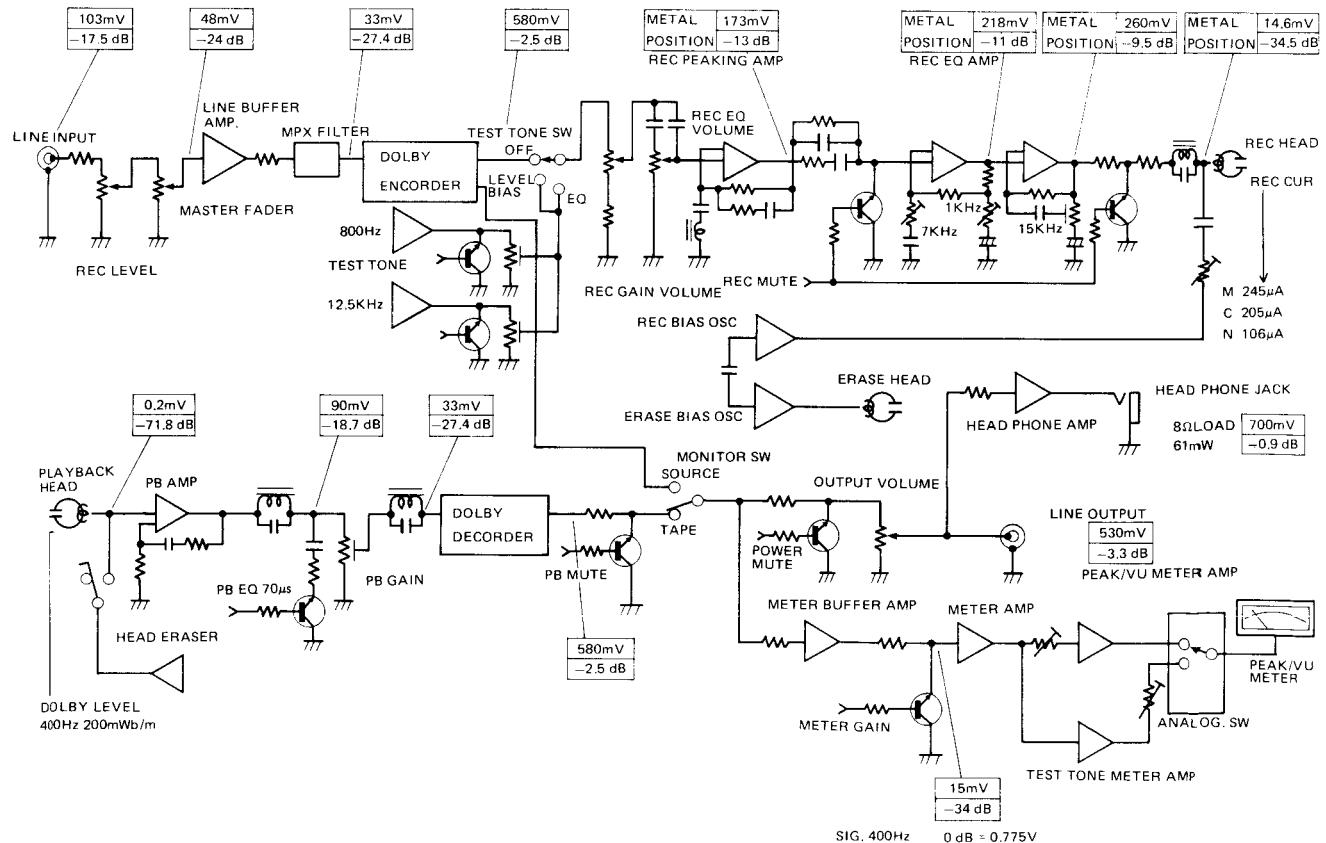


K-04

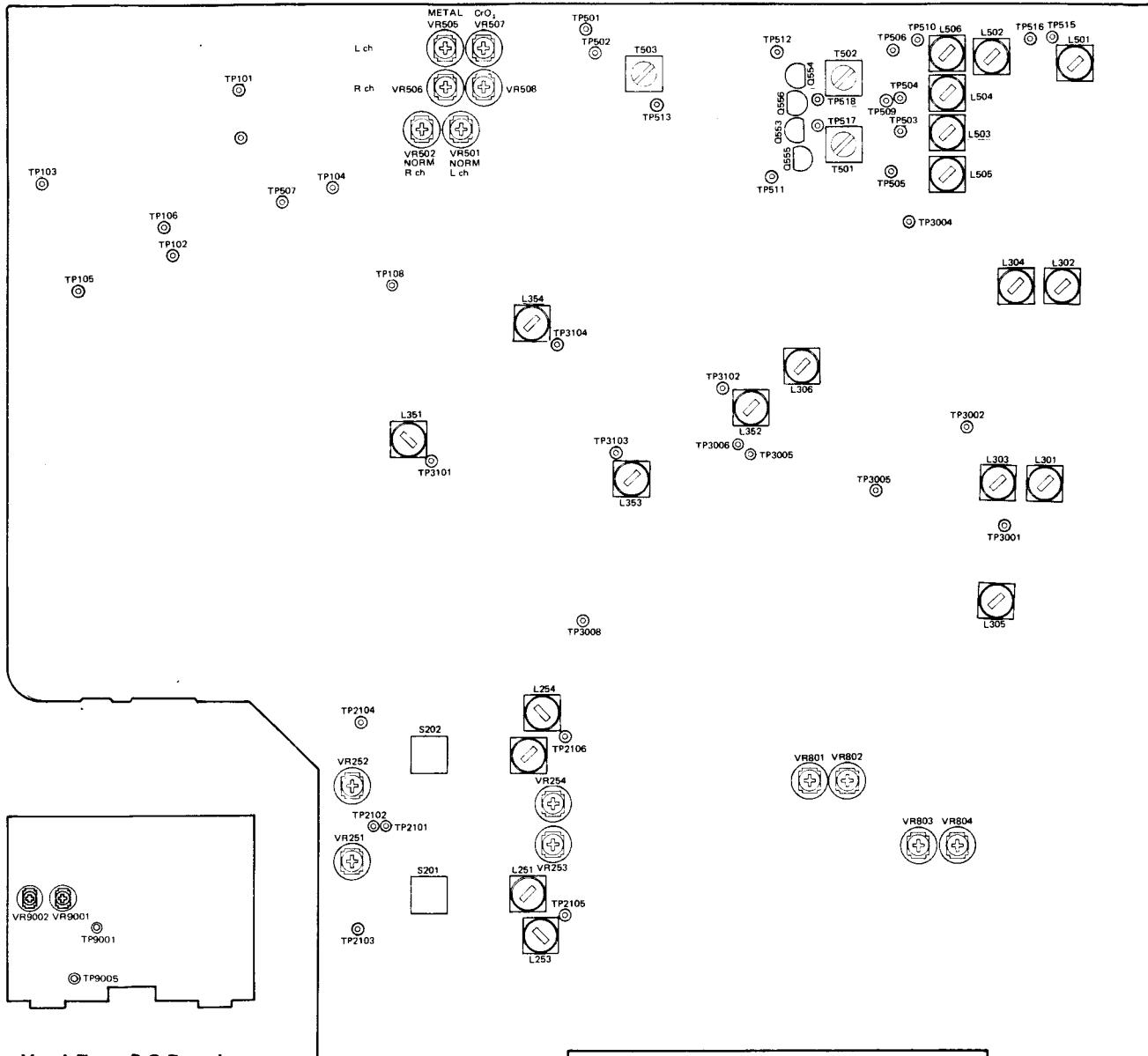
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## Block Diagram

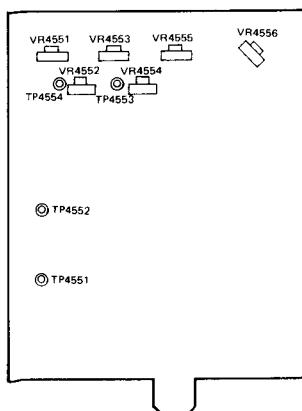


## Adjustment Locations

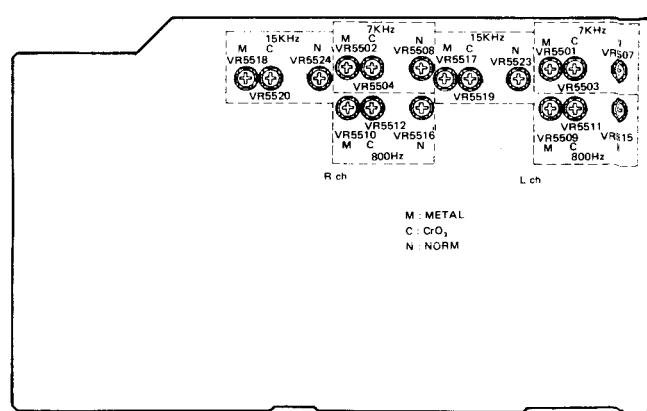


## Head Erase P.C.Board

## Master P.C.Board



### **Head Phone & Meter P.C.Board**



### Record EQ P.C.Board

# Adjustment Procedures

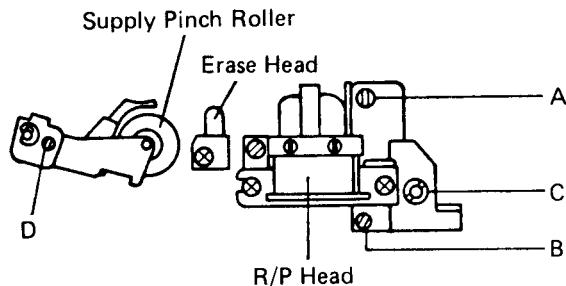


Figure 15

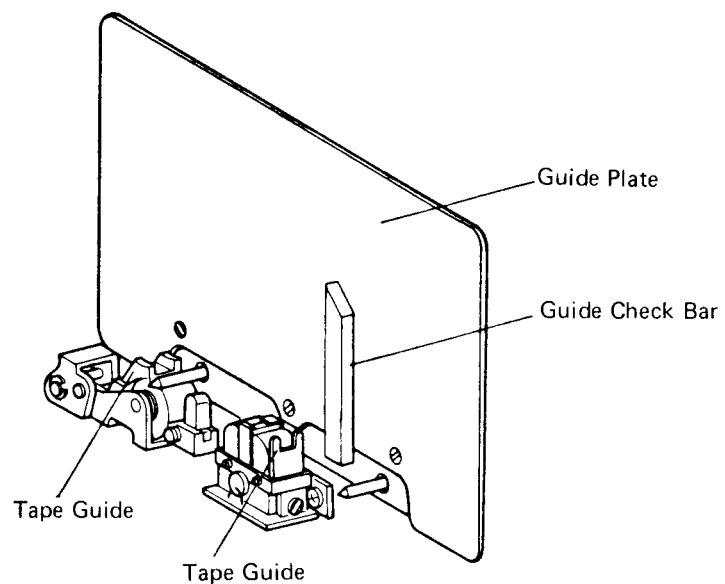


Figure 16

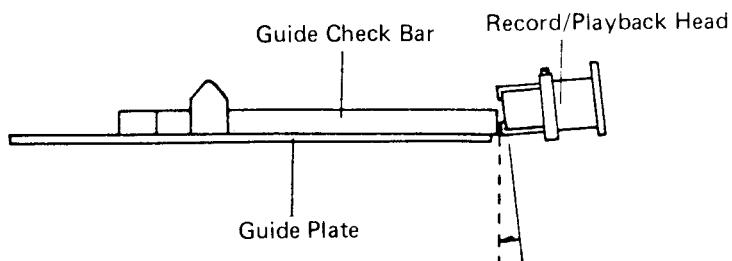


Figure 17

## CONNECTION DIAGRAMS

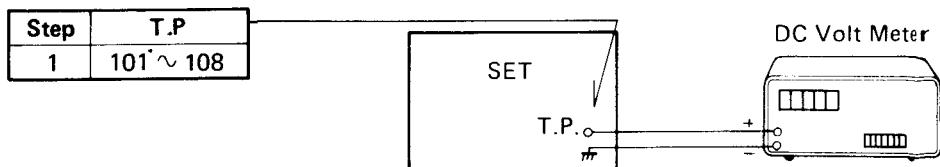


Figure 18

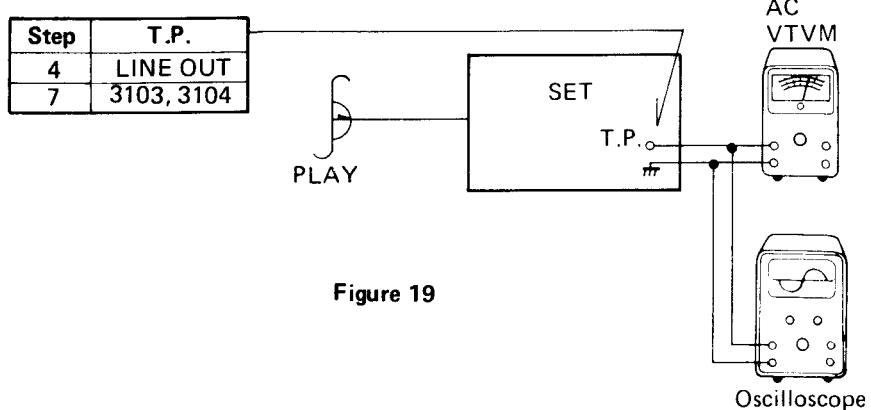
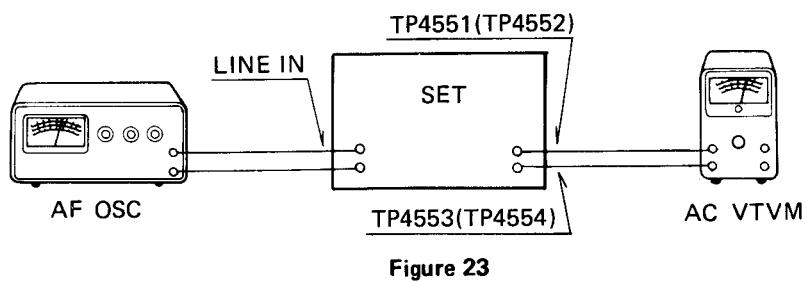
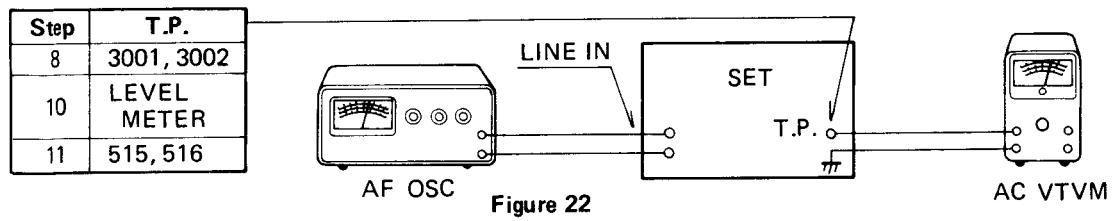
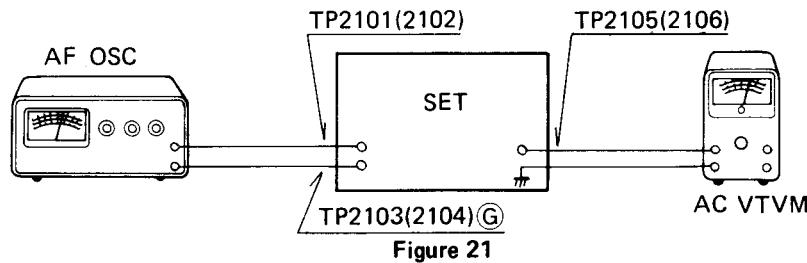
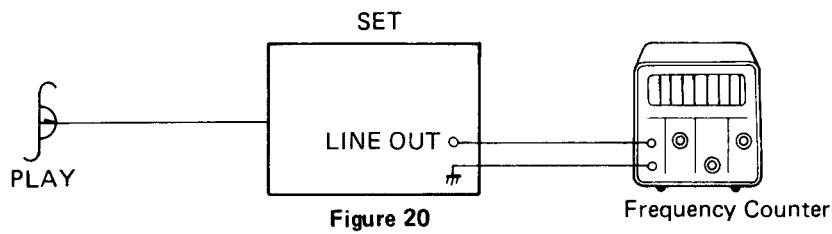
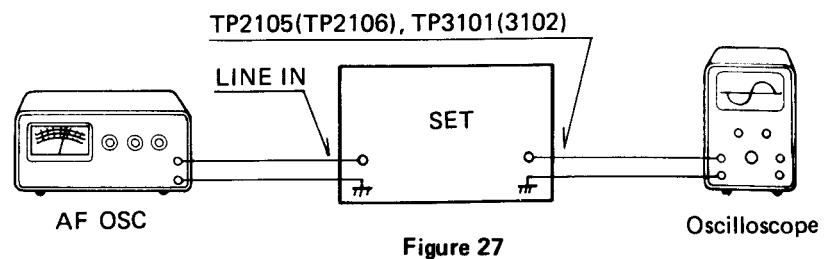
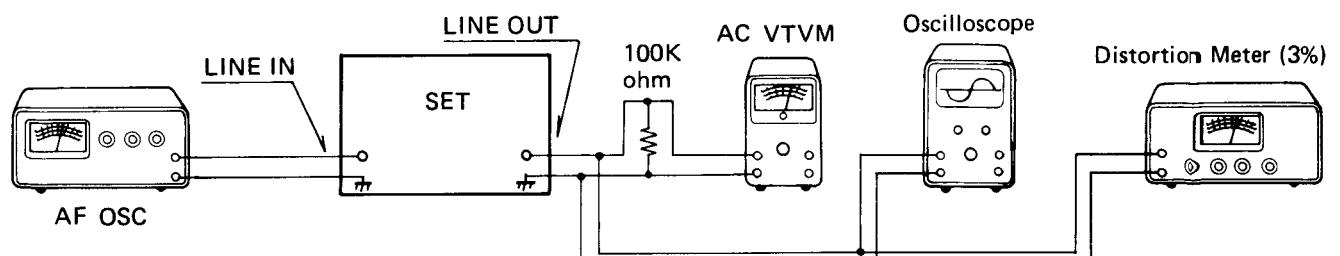
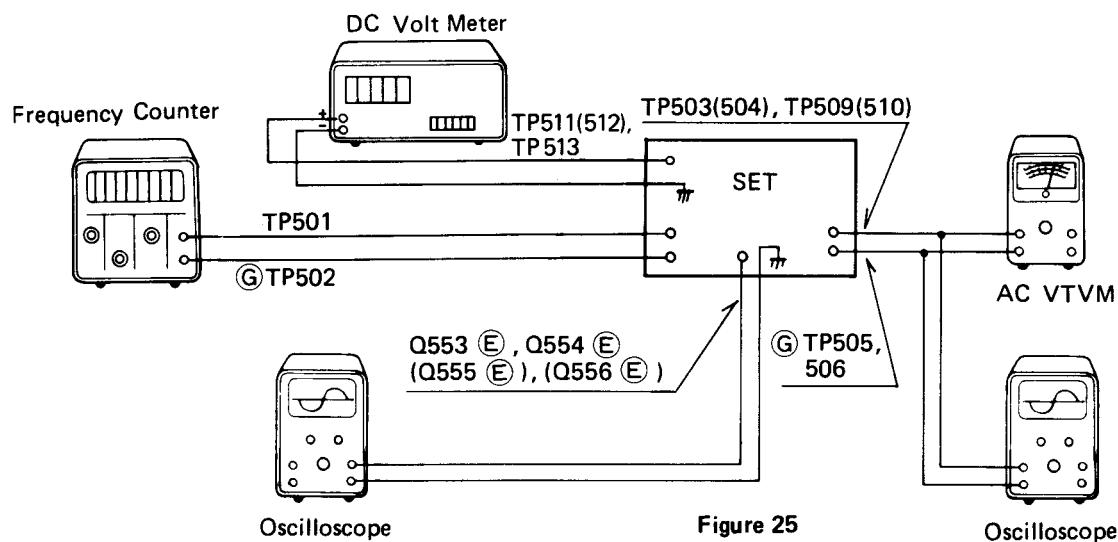
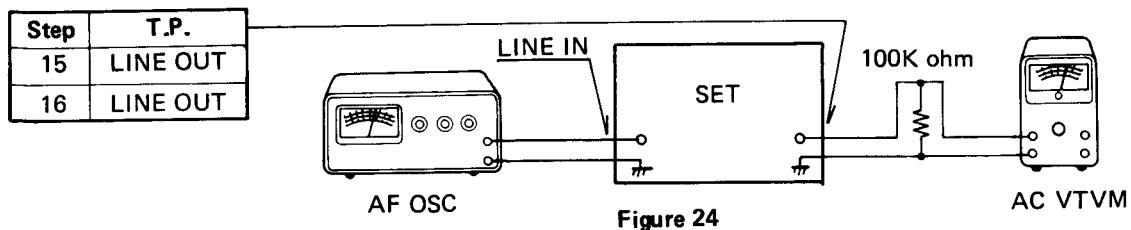


Figure 19





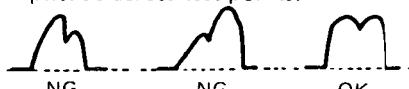
**Notes:** (1) Adjustments are proceeded under the following conditions such as switch and volume settings unless otherwise noted.

1. MONITOR switch: TAPE
2. PEAK/VU Left & Right meters: PEAK
3. TAPE SELECT switch: NORM
4. DOLBY NR select switch: OFF
5. PITCH CONTROL: Center
6. BIAS FINE control: Center
7. OUTPUT LEVEL control: Maximum
8. Other switches: Off position

(2) The MASTER FADER and REC LEVEL volumes on these adjustments follow as positions in step 8.

Step	Adjustment Items	Mode	Adjustment Parts	Test Points	Connection	Remarks																				
1	DC Voltage check	STOP			Figure 18	<p>Check voltage at each Test Point.</p> <table border="1"> <tr> <td>Test Point</td><td>TP101</td><td>TP102</td><td>TP103</td><td>TP104</td></tr> <tr> <td>Voltage(V)</td><td>30.5</td><td>18</td><td>12</td><td>21.5</td></tr> <tr> <td>Test Point</td><td>TP105</td><td>TP106</td><td>TP107</td><td>TP108</td></tr> <tr> <td>Voltage(V)</td><td>-19</td><td>AC 7</td><td>21.5</td><td>15</td></tr> </table>	Test Point	TP101	TP102	TP103	TP104	Voltage(V)	30.5	18	12	21.5	Test Point	TP105	TP106	TP107	TP108	Voltage(V)	-19	AC 7	21.5	15
Test Point	TP101	TP102	TP103	TP104																						
Voltage(V)	30.5	18	12	21.5																						
Test Point	TP105	TP106	TP107	TP108																						
Voltage(V)	-19	AC 7	21.5	15																						
2	Head Height and Tilt Angle		Screws A, B (Figure 15)			<ul style="list-style-type: none"> <li>● Measurement Gauge: M-300</li> <li>1. Head Height (Figure 16) The guide check bar should smoothly pass through the tape guide.</li> <li>2. Tilt Angle (Figure 17) The guide check bar should stay in parallel with the guide plate or the top of the guide check bar should tilt a little forward you.</li> </ul>																				
3	Tape Guide of Supply Pinch Roller		Screw D (Figure 15)			<ul style="list-style-type: none"> <li>● Measurement Gauge: M-300</li> <li>The guide check bar should smoothly pass through the tape guide of supply pinch roller. (Figure 16)</li> </ul>																				
4	Head Azimuth	PLAY	Screw C (Figure 15)	LINE OUT	Figure 19	<ul style="list-style-type: none"> <li>● Test Tape: MTT-114 (10 KHz) The left and right outputs are in-phase and maximum and equal in amplitude. If the azimuth screw movement is too large, readjust the head height and Tilt angle in step 2.</li> </ul>																				
5	Tape Speed	PLAY	VR001	LINE OUT	Figure 20	<ul style="list-style-type: none"> <li>● Test Tape: MTT-111 (3,000 Hz) Adjust VR001 to obtain output frequency reading of <math>3,000 \pm 10</math> Hz.</li> </ul>																				

Step	Adjustment Items				Connection	Remarks								
6	Playback EQ and Peak Point	PLAY	S201 VR251 } L S202 } R VR252	TP2105(L) TP2106(R)	Figure 21	<p>1. Set unit to playback mode with a blank tape loaded.</p> <p>2. Feed 200 Hz test signal from AF oscillator and adjust oscillator output so that 1V (= 0 dB) output is developed at each test point. Change oscillator frequency to 20 Hz and 7 KHz so that output levels shown below are obtained. Change oscillator frequency to 25 KHz and adjust S201, 202, VR251, 252 to find a peak level so that a peak is developed between 23 KHz and 25 KHz.</p> <p>* To obtain a peak point is easy to rotate VR251, 252 clockwise.</p> <table border="1"> <tr> <td>Frequency Hz</td> <td>20</td> <td>7K</td> <td>27K ~ 29K</td> </tr> <tr> <td>Output dB</td> <td>+11</td> <td>-17</td> <td>-15</td> </tr> </table> <p>3. Check for -17 dB output at 7 kHz.</p> <p>4. Check for -20.7 dB output at 7 KHz when Metal position is selected.</p>	Frequency Hz	20	7K	27K ~ 29K	Output dB	+11	-17	-15
Frequency Hz	20	7K	27K ~ 29K											
Output dB	+11	-17	-15											
7	Dolby Level	PLAY	VR253(L) VR254(R)	TP3103(L) TP3104(R)	Figure 19	<ul style="list-style-type: none"> <li>Test tape: MTT-150 (400 Hz) Adjust to obtain 580mV output at each test point.</li> </ul>								
8	Input Sensitivity Reference level (Dolby Level)	STOP MONITOR: SOURCE	REC LEVEL VOLUME MASTER FADER VOLUME	TP3001(L) TP3002(R)	Figure 22	<p>AF OSC: 400 Hz, 106 ± 18mV (Dolby level) Input.</p> <p>Adjust to obtain 580mV output at each test point.</p>								
9	Level Meter Input	STOP MONITOR: SOURCE	VR4551(L) VR4552(R)	TP4551 } L TP4553 } R TP4552 } TP4554 }	Figure 23	<p>1. Adjust each the left and right channels independently.</p> <p>2. AF OSC: 400 Hz, 335mV (Dolby level + 10 dB) Input. Adjust to obtain 12mV reading between TP4551 &amp; TP4553 (TP4552 &amp; TP4554).</p>								
10	(1) Level Meter 0dB Reading	STOP MONITOR: SOURCE	VR4553(L) VR4554(R)	Level Meter	Figure 22	<p>1. AF OSC: 400 Hz, 106mV (Dolby level) Input. Adjust for 0 dB reading on Level Meter.</p> <p>2. AF OSC: Decrease oscillator output level by 20 dB. Check the level meter pointer indicates -20 dB.</p>								

Step	Adjustment Items	Mode	Adjustment Parts	Test Points	Connection	Remarks									
	(2) TONE OSC Level	STOP MONITOR: SOURCE	VR801 } L VR803 } VR802 } R VR804 }	Level Meter	Figure 22	3. AF OSC: Increase oscillator output level by 10 dB from 106mV reference level. Check the level meter pointer indicates +10 dB.									
						<table border="1"> <tr> <td>TONE SW Position</td> <td>BIAS LEVEL</td> <td>EQ</td> </tr> <tr> <td></td> <td>VR801, 802</td> <td>VR803, 804</td> </tr> </table> <ul style="list-style-type: none"> <li>Adjust to obtain level meter pointer indicates 0 dB.</li> </ul>	TONE SW Position	BIAS LEVEL	EQ		VR801, 802	VR803, 804			
TONE SW Position	BIAS LEVEL	EQ													
	VR801, 802	VR803, 804													
11	Rec EQ Peaking fo	REC/PLAY	L501(L) L502(R)	TP515(L) TP516(R)	Figure 22	AF OSC: 27 kHz, 5.95mV (-25 dB) Input. Adjust to obtain maximum output at each test point.									
12	BIAS (1) OSC Frequency (ERASE)	REC/PLAY T. SELECT: METAL	T503	TP501 TP502(G)	Figure 25	TEST TAPE: BLANK TAPE Adjust to obtain frequency reading of 105 kHz at test point. The output level under this condition should be approx. 50 ~ 60mV (100 ~ 120mA) * TP513 value approx									
	(2) Bias Current	REC/PLAY T. SELECT METAL	T501(L) T502(R)	TP503(L) TP504(R) TP505(G) TP506(G)		<table border="1"> <tr> <td>T. Select</td> <td>METAL</td> <td>CrO<sub>2</sub></td> <td>NORM</td> </tr> <tr> <td>DC V</td> <td>11.5</td> <td>8</td> <td></td> </tr> </table>	T. Select	METAL	CrO <sub>2</sub>	NORM	DC V	11.5	8		
T. Select	METAL	CrO <sub>2</sub>	NORM												
DC V	11.5	8													
1. TEST TAPE: BLANK TAPE Connect oscilloscope to emitter of Q553 (Q555), Q554 (Q556) and adjust to obtain scope display shown below with maximum amplitude across test points.															
 <p>Emitter output voltage wave forms of Q553 (Q555), Q554 (Q556) * (Oscilloscope: 5μs/cm 0.2V/cm S<sub>t</sub>)</p>															
2. TEST TAPE: BLANK TAPE Check oscillator frequency set in step 12 (1), and if the frequency has been upset, proceed steps 12 (1) ~ (2).															
<table border="1"> <tr> <td>Bias Current</td> <td colspan="2">*Voltage at TP511, TP512 approx</td> </tr> <tr> <td>METAL</td> <td>8.4mV (3.8mA)</td> <td>4.5V</td> </tr> <tr> <td>CrO<sub>2</sub></td> <td>4.0mV (1.8mA)</td> <td>3.0V</td> </tr> <tr> <td>NORM</td> <td>2.8mV (1.3mA)</td> <td>2.0V</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	Bias Current	*Voltage at TP511, TP512 approx		METAL	8.4mV (3.8mA)	4.5V	CrO <sub>2</sub>	4.0mV (1.8mA)	3.0V	NORM	2.8mV (1.3mA)	2.0V			
Bias Current	*Voltage at TP511, TP512 approx														
METAL	8.4mV (3.8mA)	4.5V													
CrO <sub>2</sub>	4.0mV (1.8mA)	3.0V													
NORM	2.8mV (1.3mA)	2.0V													

Step	Adjustment Items	Mode	Adjustment Parts	Test Points	Connection	Remarks																									
	(3) Bias Trap	REC/PLAY T. SELECT: METAL	L503 } L L505 } L504 } R L506 }	TP509(L) TP510(R)		<p>1. TEST TAPE: BLANK TAPE Adjust to obtain minimum amplitude of Bias voltage wave form at each test point.</p> <p>2. Check oscillator frequency set in step 12 (1), and if the frequency has been upset, readjust the frequency according to steps 12 (1) ~ (3).</p>																									
13	Peak Bias	REC/PLAY		LINE OUT	Figure 26	<p>1. Level AF OSC: 400 Hz, 106mV Adjust Level Adjust Volume until record/playback output of 550mV, which is the same level as that of SOURCE, is obtained.</p> <p>2. Bias AF OSC: 400Hz, 106mV (Dolby Level) Input. Adjust Bias Adjust Volume so that Distortion Values shown in table below is obtained.</p>																									
						<table border="1"> <thead> <tr> <th>Reference Tape</th><th>AF OSC Level</th><th>Distortion</th><th>Line Out</th></tr> </thead> <tbody> <tr> <td rowspan="2">AC-711</td><td>106mV</td><td>—</td><td>550mV</td></tr> <tr> <td>106mV</td><td>1.3~1.5%</td><td>approx. 550mV</td></tr> <tr> <td rowspan="2">AC-512</td><td>106mV</td><td>—</td><td>550mV</td></tr> <tr> <td>106mV</td><td>1.3~1.5%</td><td>approx. 550mV</td></tr> <tr> <td rowspan="2">AC-223</td><td>106mV</td><td>—</td><td>550mV</td></tr> <tr> <td>106mV</td><td>1.3~1.5%</td><td>approx. 550mV</td></tr> </tbody> </table> <p>* If level differences between TAPE and SOURCE positions are observed at -25 dB and 0 dB level alignments, the former should have priority over the latter.</p> <p>* Confirm LEVEL &amp; BIAS controls are at center click position.</p>	Reference Tape	AF OSC Level	Distortion	Line Out	AC-711	106mV	—	550mV	106mV	1.3~1.5%	approx. 550mV	AC-512	106mV	—	550mV	106mV	1.3~1.5%	approx. 550mV	AC-223	106mV	—	550mV	106mV	1.3~1.5%	approx. 550mV
Reference Tape	AF OSC Level	Distortion	Line Out																												
AC-711	106mV	—	550mV																												
	106mV	1.3~1.5%	approx. 550mV																												
AC-512	106mV	—	550mV																												
	106mV	1.3~1.5%	approx. 550mV																												
AC-223	106mV	—	550mV																												
	106mV	1.3~1.5%	approx. 550mV																												

Step	Adjustment Items	Mode	Adjustment Parts	Test Points	Connection	Remarks																					
14	PB AMP Bias Trap	REC/PLAY T. SELECT: METAL	L251 }-L L253 }-L L252 }-R L254 }-R L351(L) L352(R)	TP2105(L) TP2106(R) TP3101(L) TP3102(R)	Figure 27	<p>1. AF OSC: 400 Hz, 31mV (-25 dB from 550mV) Input. If record/playback output signal (wave form) is modulated or superimposed with high frequency signals (Bias signal), adjust for minimum amplitude of the high frequency signals.</p> <p>2. If level variation is observed at Dolby NR: C position, readjust L351 &amp; L352 for minimum amplitude of scope display at 400 Hz.</p> <p>* Record/Play-back output wave form superimposed with bias signal.</p>																					
15	Record/Playback Frequency Response	REC PLAY		LINE OUT	Figure 24	<p>AF OSC: 31mV (-25 dB from 550mV) Input.</p> <p>&lt;Specifications of Record/Play-back Frequency Response&gt; Adjust respective trimming resistor so that record/playback frequency response within the above limits, (referred to 800 Hz) is obtained.</p> <table border="1"> <thead> <tr> <th colspan="5">Adjustment Parts</th> </tr> <tr> <th>Reference Frequency 800Hz L, R</th> <th>Mid &amp; High Frequencies 7kHz L, R</th> <th>High Frequency 15kHz L, R</th> <th>Reference Tape</th> </tr> </thead> <tbody> <tr> <td>VR5509, VR5510</td> <td>VR5501, VR5502</td> <td>VR5517, VR5518</td> <td>AC-7 1</td> </tr> <tr> <td>VR5511, VR5512</td> <td>VR5503, VR5504</td> <td>VR5519, VR5520</td> <td>AC-5 2</td> </tr> <tr> <td>VR5515, VR5516</td> <td>VR5507, VR5508</td> <td>VR5523, VR5524</td> <td>AC-2 3</td> </tr> </tbody> </table> <p>* A. If the frequency response is out of specifications, try to readjust, using following steps: 1. Step 15 2. Steps 2 ~ 4 3. Step 13 (Try to change bias signal level within a range in which audio output distortion does not exceed maximum limit.)</p>	Adjustment Parts					Reference Frequency 800Hz L, R	Mid & High Frequencies 7kHz L, R	High Frequency 15kHz L, R	Reference Tape	VR5509, VR5510	VR5501, VR5502	VR5517, VR5518	AC-7 1	VR5511, VR5512	VR5503, VR5504	VR5519, VR5520	AC-5 2	VR5515, VR5516	VR5507, VR5508	VR5523, VR5524	AC-2 3
Adjustment Parts																											
Reference Frequency 800Hz L, R	Mid & High Frequencies 7kHz L, R	High Frequency 15kHz L, R	Reference Tape																								
VR5509, VR5510	VR5501, VR5502	VR5517, VR5518	AC-7 1																								
VR5511, VR5512	VR5503, VR5504	VR5519, VR5520	AC-5 2																								
VR5515, VR5516	VR5507, VR5508	VR5523, VR5524	AC-2 3																								

Step	Adjustment Items	Mode	Adjustment Parts	Test Points	Connection	Remarks
						B. If the frequency response is out of specifications over high end, try to repeat step 6.
16	TEST TONE OSC Adj.	REC/PLAY	VR4555 VR4556	LINE OUT LEVEL METER	Figure 24	<p>AF OSC: 400 Hz, 4.2mV (-28 dB from 106mV) Input.</p> <ol style="list-style-type: none"> <li>1. Confirm each output (REC/PLAY LEVEL) of TAPE &amp; SOURCE is -28 dB.</li> <li>2. Set TONE switch to BIAS LEVEL and adjust to obtain 0 dB on LEVEL METER.</li> </ol>
17	HEAD Demagnetizer (1) Level	POWER ON ↓ POWER OFF	VR9001	TP9001 TP9005	Figure 28	<ol style="list-style-type: none"> <li>1. Connect TP9001 to GND.</li> <li>2. Adjust to obtain 3.16V output at test point.</li> </ol>
	(2) OSC Frequency		VR9002			<ol style="list-style-type: none"> <li>1. Adjust to obtain frequency reading of <math>880 \pm 1</math>Hz at test point.</li> </ol>

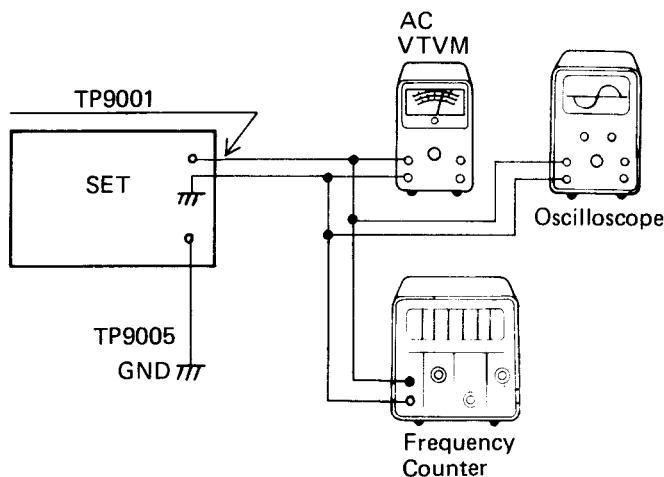
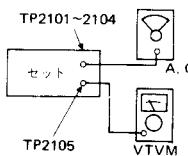
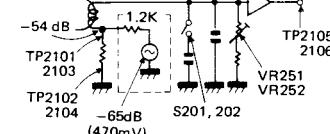
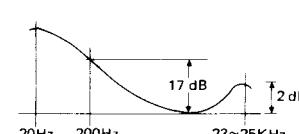
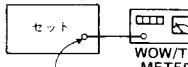
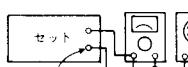
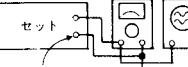
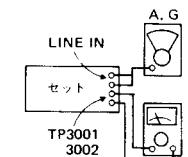


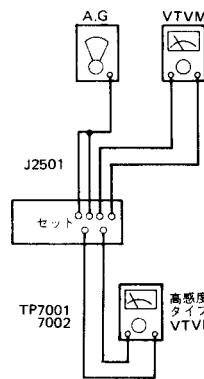
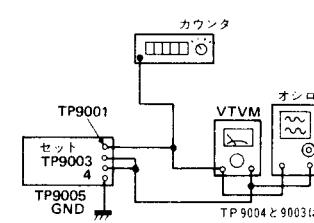
Figure 28

## 調整手順

ステップ名称	セットの状態	調整位置	テストポイント	接続方法	手順・テストテープ・規格等
1. Power-ON チェック	STOP	目視			各部ライティングに異常がないか目視チェック、異音の発生、発熱等がないかチェック。
2. DC 電圧のチェック	STOP		TP101 TP102 TP103 TP104 TP105 TP106 TP107 TP108 CB104の#ピン	30.5V 18.0V 12.0V 21.5V -19.0V AC7.0V 21.5V 15.0V -12±1V	テスター (DC 電圧計)
3. PBEQAMP のピーキング調整	PLAY TAPE SELECT: NORM	S201 S202 VR251 VR252	TP2101 2103 TP2102 2104 TP2105 2106		 <p>20Hz + 9 dB 200Hz 0dB .....(1V) Ref 7 KHz -17dB 23~25KHz -15dB ピーカポイント</p> <p>EQ 120μS 70μS では 7 KHz で -20dB</p> <p>*200Hz で 0dBV 出力となる様、OSC 出力を微調整する。</p> 
4. T. S WOW	PLAY T. Select: NORM DOLBY NR: OFF	デッナメカ VR001	TP3104		# 111D 3 KHz テストテープ TS 3000Hz +10Hz - 0 Hz (S~E の間) ピッヂコン.....センタークリック (約7.3%可変出来る) WOW.....0.030以下 x = 0.025%
5. アジマス微調	PLAY T. S: NORM NR: OFF	アジマス スクリュー	TP3103 TP3104		# 114 10KHz テストテープ 最大出力、同位相 (調整は50°以内に) STOP-PLAY で位相の安定度が悪いものは再調 (送行関係)
6. ドルビーレベル	PLAY T. S. NORM NR: OFF	VR253 VR254	TP3103 TP3104		# 150 400Hz テストテープ 580mV (DOLBY IC MONITOR OUT の出力調整)
7. 入力感度基準レベル調整	SOURCE NR: OFF MIC VR: MIN	VR2905(MASTER) VR2903(REC VR) VR2904(REC VR)	TP3001 TP3002		OSC 400Hz LINE IN 106±18mV 580mV に調整

ステップ名称	セットの状態	調整位置	テストポイント	接続方法	手順・テストテープ・規格等
8. レベルメータ入力調整	SOURCE NR: OFF P/VU: PEAK	VR4551 4553 TP4552 4554	TP4551 4553 TP4552 4554		<p>VR4551 i=1mA 100K VR4552 100K</p> <p>L. R片側 づつ持続して調整のこと。 V T V M の G N D とセ ットの G N D は離して おくこと</p> <p>OSC400Hz INPUT+10dB IN (+10dB DOLBY LEVEL) 100Ω 両端電圧で12mVに調整</p>
9. レベルメータDb指示調整	SOURCE NR: OFF P/VU: PEAK	VR4553 4554	メーターの指 計 (目視)		<p>OSC 400Hz 106mV 入力 DOLBY LEVEL でメータの指示を 0dB に調 整、確認のため -20dB にしてレベルメータ が -20dB となる事をチェック。</p>
10. REC ピーキング $f_0$ 調整	REC/PLAY	L501 502	TP515 516		<p>入力 -25dB f: 27KHz レベルが最大になる様調整する</p> <p></p>
11. バイアス a) OSC 周波数調整 (Erace)	REC/PAUSE T. S: METAL (CrO <sub>2</sub> ) NORM	T503	TP501 502		<p>周波数105KHzになる様 L5006を調整する。 (この調整は各トラップ調整後105KHzより、ずれていれば再び行なうこと。) 消去電流…50~60mV (100~120mA) DC 電源…Metal…12V C, N…8.7V ※ C, N の場合は周波数が多少変化する</p>
b) バイアス OSC 用 電圧 調整	REC/PLAY T. S: METAL (CrO <sub>2</sub> ) NORM	VR507, 508-M 505, 506-C 501, 502-N	TP511 512		<p>バイアス OSC 用 DC 電圧の仮設定 METAL 4.8V CrO<sub>2</sub> 2.4V NORM 1.7V</p>
c) バイアス電流 B. F: センター	REC/PLAY T. S: METAL (CrO <sub>2</sub> ) NORM	T501 502	TP503, 505 504, 506 TP517 518		<p>T501, 502にてバイアス電流最大値に調整す る。 (Q553又は554の Emitter 波形をモニターし て調整) ※周波数をモニターして105Kよりそれたら 再調  M: 8.4mV (3.8mA) C: 4.0mV (1.8mA) N: 2.8mV (1.3mA)</p>

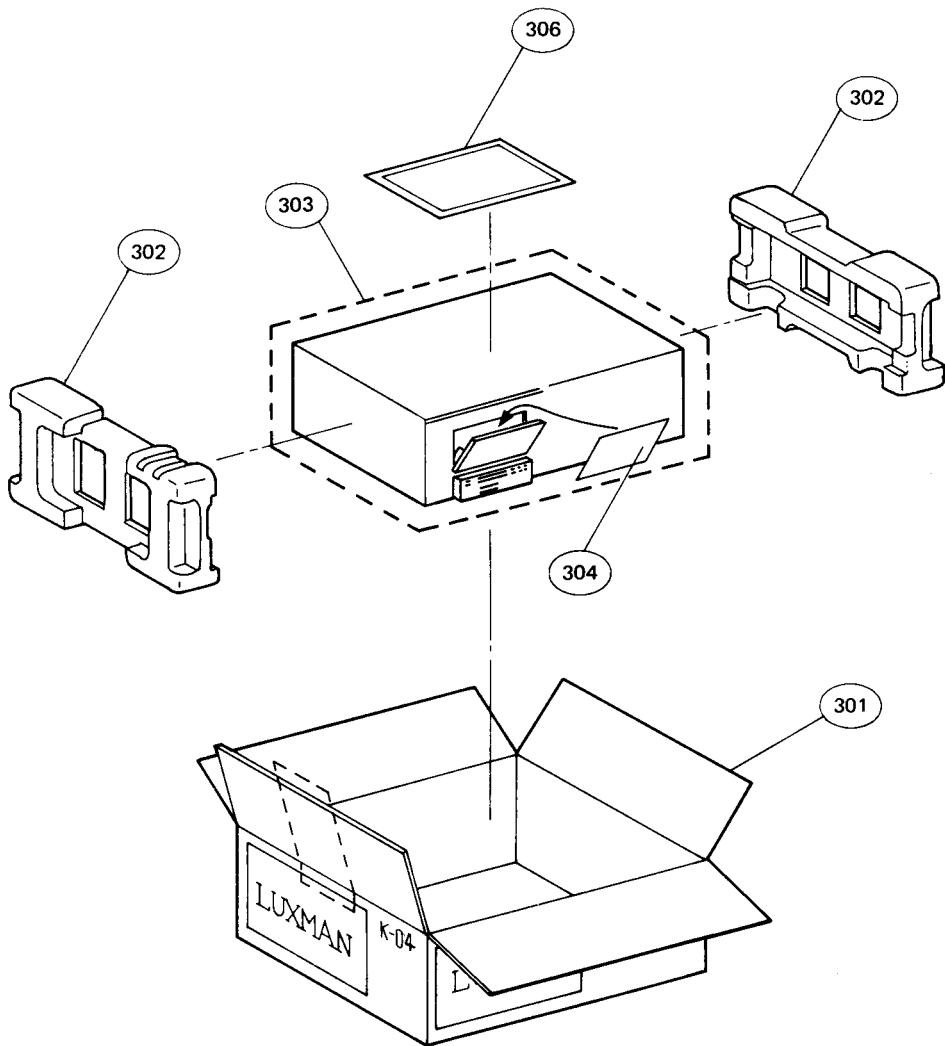
ステップ名称	セットの状態	調整位置	テストポイント	接続方法	手順・テストテープ・規格等																
d) バイアス トラップ調整	REC/PLAY T. S: METAL	L503, 505 504, 506	TP509 510		L503, L504及びL505, L506の調整でTP509, TP510のBIASもれレベルを最少にADJする。 トラップコイルズレの有るときのみ再調を行なう。 (基板単体でコイルの調整をしているので普通は再調しない)																
12. ピークレベルバイアス調整	REC/PLAY T. S: METAL NR: OFF B. F: センター <sup>CrO<sub>2</sub></sup> NORM	VR507 508 VR5509 5510 VR505, 506 VR5511, 5512 VR501, 502 VR5515, 5516	LINE OUT		f: 400Hz 0dB (約 500mV) LINE IN TAPE: TDK AC711 録音出力を550mV (TAPE/SOURCE同じレベル)に合わせながら MAX レベルにバイアス調整する。 VR507, 508…MASTER BOAD…バイアス量 VR5509, 5510…REC EQ PANEL…レベル調整  以下 CrO <sub>2</sub> 、NORM とも合わせる。 CrO <sub>2</sub> …AC512 550mV 1.3% NORM…AC223 550mV 1.3% このときBIAS FINEを+/-に可変して、 レベルの変化がL, R 同等になる様、L, 又は R のBIASを再調する。 これにより、L, R に多少の歪率アンバラが発 生するが、L, R の歪率を1.3~1.5%位の範囲 に入る様、調整のこと。																
13. PBアンプ バイアス トラップ 調整	REC/PLAY T. S: METAL NR: OFF B. F: センター	L251, 252 L253, 254 L351, 352	TP2105 2106 TP3101 3102		  -25dB、400Hz 波形にバイアスモレが有る 場合は、L251、252、253、254 を調整する。 これらの調整は初期チェックでOKならば、 コイル調整は行なわなくて良い(基板単体 で調整済のため)																
14. 録再F特調 整	REC/PLAY T. S: METAL NR: OFF CrO <sub>2</sub> NORM	VR5501…7KHz 5524 55C VR5517…15KHz 5524	J4001 LINE OUT		 上記の範囲を目標に調整する。 <table border="1"> <tr> <th></th> <th>基準レベル 800Hz</th> <th>中 7KHz</th> <th>高 15KHz</th> </tr> <tr> <td>Metal (AC-711)</td> <td>VR5509 5510</td> <td>VR5501 5502</td> <td>VR5517 5518</td> </tr> <tr> <td>CrO<sub>2</sub> (AC512)</td> <td>VR5511 5512</td> <td>VR5503 5504</td> <td>VR5519 5520</td> </tr> <tr> <td>NORM (AC-223)</td> <td>VR5515 5516</td> <td>VR5507 5508</td> <td>VR5523 5524</td> </tr> </table> 各テープにて上記調整用VRにて調整、場 合によってはくり返し調整が必要があり、 又バイアスも初期値より多少の再調を要する 場合もある。 (歪率で2%位まで) 基準レベル調整のとき0dB調整と-25dB 調整で差の有る場合は、-25dB調整を優先 する。		基準レベル 800Hz	中 7KHz	高 15KHz	Metal (AC-711)	VR5509 5510	VR5501 5502	VR5517 5518	CrO <sub>2</sub> (AC512)	VR5511 5512	VR5503 5504	VR5519 5520	NORM (AC-223)	VR5515 5516	VR5507 5508	VR5523 5524
	基準レベル 800Hz	中 7KHz	高 15KHz																		
Metal (AC-711)	VR5509 5510	VR5501 5502	VR5517 5518																		
CrO <sub>2</sub> (AC512)	VR5511 5512	VR5503 5504	VR5519 5520																		
NORM (AC-223)	VR5515 5516	VR5507 5508	VR5523 5524																		

ステップ名称	セットの状態	調整位置	テストポイント	接続方法	手順・テストテープ・規格等
					7KHz 15KHz の調整は +0.5~1.0dB を目標に合わせる。 上記 dB 値は、基準周波数の SOURCE の値に対する各周波数の TAPE の値、15KHz の調整はレベル変動ひびクロスフィードの影響が有るのでスィープ又は巻きもどして再生してチェックのこと。
15. TEST TONE OSC レベルセット	STOP VR511, VR512 センターリック	VR801, 802 VR803, 804 VR2903 2904 2905	TP7001, 7002 J2501 (LINE IN/ OUT)		基準レベル-28dB に REC VR 調整 LINE IN、800Hz (0dB=550mV) TONE ON (LEVEL) して VR801、802、 (800Hz) VR803、804 (12.5K) で-28dB (DOLBY) に調整 ※ TP7001、7002 で LINE-28dB と TONE ON のレベルを合わせる
16. TONE、 LEVEL METER 調整	REC/PLAY TAPE METAL	VR511, 512 (LEVEL) VR4555, 4556	レベルメーター (目視)		-28dB、800Hz、LINE IN で録音 SOURCE/TAPE のレベルを微調整して同レ ベルにする (VR511, 512) TONE ON (LEVEL) してレベルメーターの 0dB 目盛に合わせる ※ TAPE のレベル変動、ドロップアウト等に 注意して、REC/TAPE のレベルを SOURCE と同じくして 0dB に合わせる
17. HEAD ERASER の調整	POWER -OFF POWER -ON (くり返して チェック)	VR9001 9002	TP9001 TP9005 TP9003 TP9004	 ※調整 Power-ON 直後に行なう (ラインで はエーティング放置後 Power-ON して調整)	TP9005 を GND したとき TP9001 より消 磁波形を観測 VR9001 にてレベル調整…… 3.16 (+10dBV.) VR9002 にて周波数調整 ……880±1Hz、レベル、周波数とも上記値に なるまで交互に調整する。 Power-Off して再び Power-ON するとき リレー RY9001 が ON する。(カチッと音がす る) このとき TP9003 (又は 9004) より波形 とレベルを測定する。 Power-ON 直後、消磁波形スタート……約 1.35V まもなく波形収束が始まり、波形が小さくなる。 しばらくしてリレーが切れる。(音がする) この観測を数回くり返して見る。波形の収束 が終らないうちにリレーが切れたり、波形の 発生がない等の異常がないかチェック。

# Destination's Parts List

Symbol No.	Description	FR Mecha	FD Mechanism				
		J Japan	J Japan	UP Canada	AK Europe Other	AG England Australia	
		100V	100V	120V	220V	240V	
<b>Explode View</b>							
10	Chassis, Bottom	27D50694F03	27D50694F03	27D50694F03	27D50694F04	27D50694F04	
19	Stopper, Cord	43B41625J01	43B41625J01	43B41625J01	43B41625J02	43B41625J04	
37	Ass'y, Control PCB	01V61400F34	01V63500F43	01V63500F43	01V63500F43	01V63500F43	
55	Cover, Rear	15D58657F02	15D58657F02	15D58657F04	15D58657F04	15D58657F04	
57	Ass'y, Master Bord	01V61400F30	01V63500F41	01V63600F09	01V63600F09	01V63600F09	
65	Bracket, Trans	07A61182F01	07A61182F01	None Use	None Use	None Use	
66	Trans, Power	25T60615F01	25T60615F01	None Use	None Use	None Use	
67	Plug, AC Cord	28T41871U01	28T41871U01	28T40916U01	28T50179U01	28T55003F02	
68	Terminal, Sensor	29A58768F01	29A58768F01	None Use	None Use	None Use	
68	Housing, Sensor	15B58781F01	15B58781F01	None Use	None Use	None Use	
69	Neon Lamp	65T61618F01	65T61618F01	None Use	None Use	None Use	
71	SW, Select	None Use	None Use	40T40705T04	40T40705T04	40T40705T04	
72	Bracket, SW	None Use	None Use	07A61716F01	07A61716F01	07A61716F01	
76	Bracket, Front	07C52106F01	07C61799F01	07C61799F01	07C61799F01	07C61799F01	
89	Trans, Power	None Use	None Use	25T61715F01	25T61715F01	25T61715F01	
90	Label, Select	None Use	None Use	54A40672U01	54A40672U01	54A40672U01	
96	Screw, MCH	None Use	None Use	03S52360F14	03S52360F14	03S52360F14	
110	Cover, Mecha	15B50731F01	15B61798F01	15B61798F01	15B61798F01	15B61798F01	
113	Lens, Dust Cover	61A50736F01	None Use	None Use	None Use	None Use	
115	Screw, Tapping	03S40012G58	None Use	None Use	None Use	None Use	
116	PCB, Cassette LED	84D60656F08	None Use	None Use	None Use	None Use	
117	LED, TLUG163	48T52606F01	None Use	None Use	None Use	None Use	
118	Label, Reflector	54A55965F01	None Use	None Use	None Use	None Use	
121	Spring, Lock	41A50738F01	41A62693F01	41A62693F01	41A62693F01	41A62693F01	
130	Shaft, Deck	47A50720F01	47A50720F02	47A50720F02	47A50720F02	47A50720F02	
132	Bracket, Deck L	07C50714F01	01B60948F01	01B60948F01	01B60948F01	01B60948F01	
133	Bracket, Deck R	07C50715F01	07C50715F02	07C50715F02	07C50715F02	07C50715F02	
135	Lever, Cassette	45B50707F01	45B50707F02	45B50707F02	45B50707F02	45B50707F02	
186	Cassette Deck	01U5900F48	01U62000F36	01U62000F36	01U62000F36	01U62000F36	
197	LED, SLF	None Use	48T60878F01	48T60878F01	48T60878F01	48T60878F01	
198	Rubber, Eject	None Use	75A60759F01	75A60759F01	75A60759F01	75A60759F01	
202	Arm, Eject	None Use	45B60675F01	45B60675F01	45B60675F01	45B60675F01	
203	Bush, Arm Eject	None Use	43A60764F01	43A60764F01	43A60764F01	43A60764F01	
204	Screw, T-Tite	None Use	03S44205G34	03S44205G34	03S44205G34	03S44205G34	
<b>(Master Bord)</b>							
TH5001	Termistor, 5K ohm	None Use	48T57369F15	48T57369F15	48T57369F15	48T57369F15	
F101, 102, 103	Fuse, T-1A	None Use	None Use	65T42077U16	65T42077U16	65T42077U16	
F104	Fuse	65T57086F04	65T57086F04	65T42077U16	65T42077U16	65T42077U16	
C115	Capacitor, 3300uF	None Use	23S41198U77	23S41198U77	23S41198U77	23S41198U77	
<b>(Control PCB)</b>							
D6015	Diode, SS176TPA7	None Use	None Use	48T58583F01	48T58583F01	48T58583F01	
ZD6004	Diode, Zener	48T40059U26	48T40059U13	48T40059U13	48T40059U13	48T40059U13	
ZD6005	Diode, Zener	48T40150U28	48T40150U22	48T40150U22	48T40150U22	48T40150U22	
ZD6006	Diode, Zener	48T40150U49	48T40059U31	48T40059U31	48T40059U31	48T40059U31	
ZD6007	Diode, Zener	48T40150U08	48T40150U14	48T40150U14	48T40150U14	48T40150U14	
R6002	Resistor, Allay	51T52333F02	51T52333F07	51T52333F07	51T52333F07	51T52333F07	
<b>(Packing Material)</b>							
306	Owner's Manual	68R60895F01	68R60895F01	68R62431F03	68R62431F01	68R62431F01	

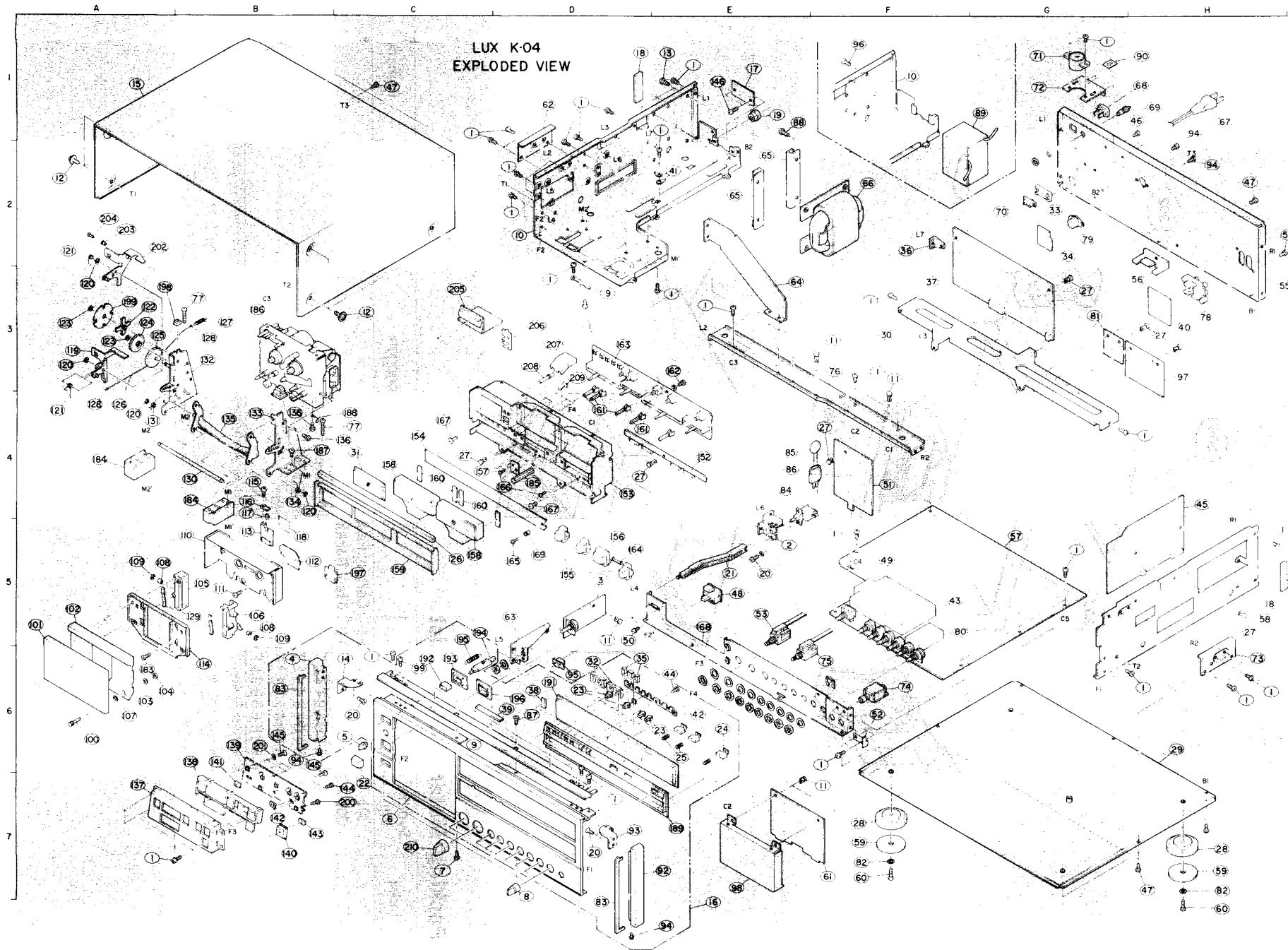
## Packing Material Parts List



### Packing Material Parts List

Index	Symbol No.	Stock No.	Description	Remarks
	301	56C53420F51	Carton, Packing	
	302	56D60007F01	Tray, Packing	
	303	56B40442T13	Packing Front Frame	
	304	56B40442T11	Packing Front Frame	
	306	68R62431F01	Owner's Manual	UP, AK, AG
		68R60895F01	Owner's Manual	J

## Exploded View



## Exploded View Parts List

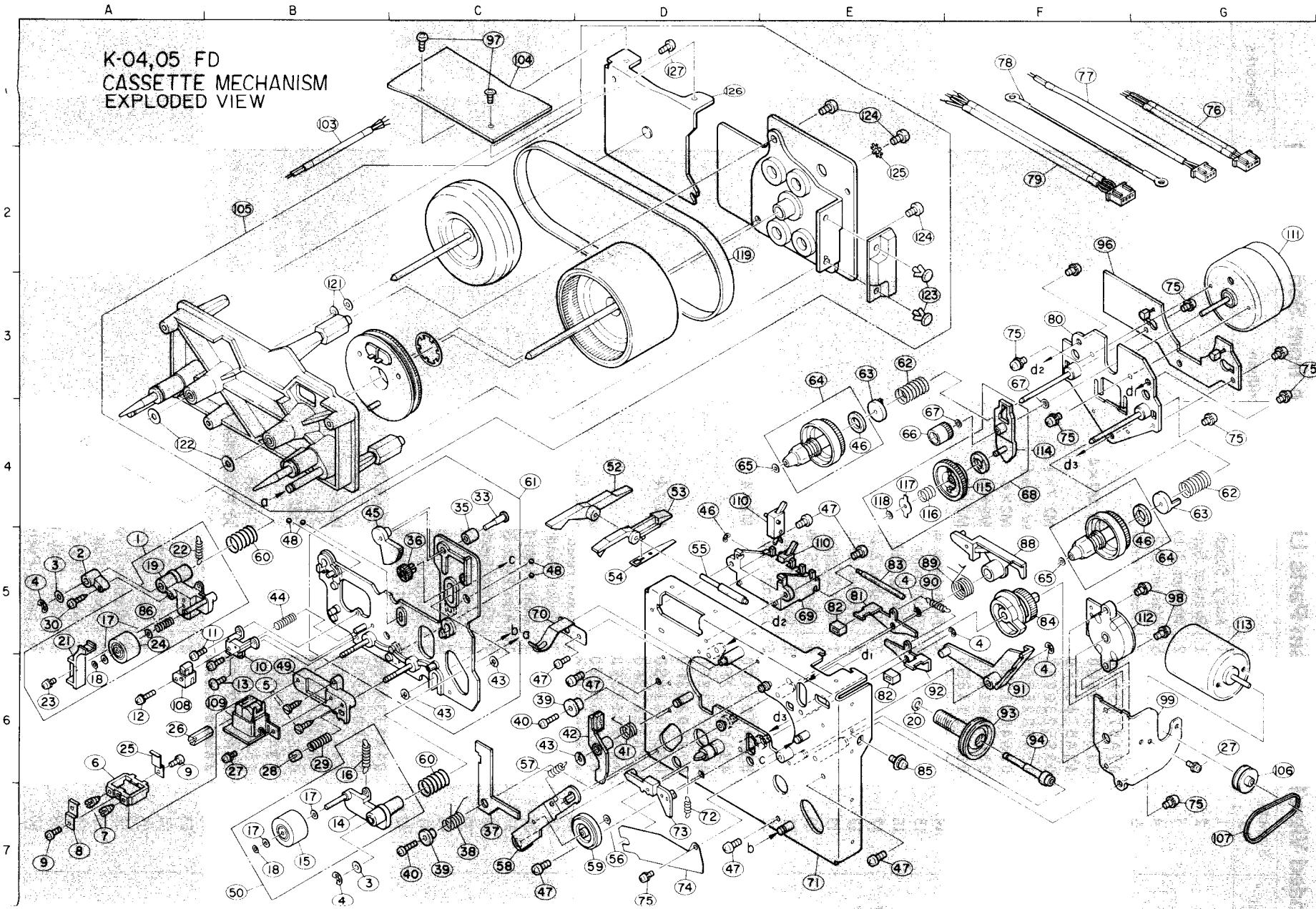
Index	Symbol No.	Stock No.	Description	Remarks
A7, C1	1	03A44642J03	Screw, T-Tite M3×5	
E5	2	07A52103F01	Bracket, Switch & Volume	
D5	3	01V61400F38	Ass'y Volume, Pitch Control	
B6	4	64B58645F01	Panel, Side(L)	
C6	5	36A47129F06	Knob, Bias	
C7	6	64D60390F01	Panel, Front	
C7	7	03S44205G38	Screw, T-Tite M3×6	
D7	8	36A58772F01	Knob, Control	
D2	10	27D50694F04	Chassis, Bottom	AK, AG
		27D50694F03	Chassis, Bottom	J, UP
D5, F3	11	05B41635J03	Rivet, Push	
A2, C3	12	03S40036U01	Screw, T-Tite M4×8	
E1	13	03S44205G09	Screw, T-Tite M4×8	J
C6	14	07A58638F01	Bracket, Side(L)	
A1	15	15D58656F01	Cover, Top	
E7	16	01V61400F51	Ass'y Panel, Front	
E1	17	01V61500F01	Ass'y Senser, Line	
D1, H5	18	75A42565P08	Cushion, Rubber	
E1	19	43B41625J02	Support, Cord	AK
		43B41625J04	Support, Cord	AG
		43B41625J01	Stopper, Cord	J, UP
C6, D7	20	03S40011G41	Screw, MCH M3×6 Flat	
E5	21	45B44337F01	Lever, Knob	
C7	22	36A45460F06	Knob, Power	
D6, E6	23	36A56006F02	Knob, Push	
E6	24	36A47373F04	Knob, Push "L"	
E6	25	41A41324F01	Spring, Push	
C5	26	75A57803F02	Cushion, Meter	
F3, G3	27	05B41635J02	Rivet, Push	
F7, H7	28	01A57058F02	Ass'y Trannleg	
H6	29	15D50708F02	Cover, Bottom	
F3	30	07C50713F01	Bracket, Panel	
C4	31	61A61094F01	Lens Indicator	
D6	32	75A58135F01	Cushion, Switch	
G2	33	43A44685F01	Spacer, Switch	
G2	34	84D60656F07	P.C.B, Remote DIN	
D6	35	75A58422F01	Cushion, Switch	
F2	36	07A57334F01	Bracket, Panel L	
F3	37	01V61400F34	Ass'y PCB, Control	FR
		01V63500F37	Ass'y PCB, Control	FD
D6	38	75A42565P22	Cushion, Rubber	
D6	39	75A42565P09	Cushion, Rubber	
H3	40	84D60656F03	P.C.B, Phono Plate	
E6	42	07A58133F01	Bracket, Switch	
	43	26B58451F01	Shield, Pre Amp	
E6	44	03S40012G01	Screw, Tapping M3×5 Rnd	
H4	45	01V61400F35	Ass'y PCB, REC Equalizer	
H1	46	03S43997P88	Screw, MCH M2×6	
C1, H2	47	03S44205G38	Screw, T-Tite M3×6	
E5	48	01V61400F29	Ass'y PCB, Timer Switch	
F5	49	26B58449F01	Shield, Pre Amp	
D5	50	03C40014G06	Screw, MCH M2.6×5	
F4	51	01V61800F08	Ass'y PCB, Head Phone & Meter	
F6	52	41A58642F01	Spring, Earth	
E5	53	40T63116F01	Switch Rotary Flex SBU	
H2	54	03S40012G41	Screw, Tapping M3×8	

Index	Symbol No.	Stock No.	Description	Remarks
H3	55	15D58657F04	Cover, Rear	UP, AK, AG
		15D58657F02	Cover, Rear	J
H3	56	07A58421F01	Bracket, Panel	UP, AK, AG
G5	57	01V63600F09	Ass'y PCB Mother	FR
		01V61400F30	Ass'y PCB, Master	FDJ
		01V63500F41	Ass'y PCB Mother	
H5	58	27C50697F04	Chassis, Side	
F7, H7	59	75A53282F01	Pad, Transleg	
F7, H7	60	03S44205G52	Screw, T-Tite M4X14 BIK	
F7	61	01V61600F19	Ass'y PCB, Auto Erase	
D1	62	07A58640F01	Bracket, Panel(L)	
D5	63	07B58648F01	Bracket, Volume	
E3	64	07B58392F01	Support, Chassis	
E2	65	07A61182F01	Bracket, Trans	J
F2	66	25T60615F01	Trans Power	J
H1	67	28T50179U01	Plug, AC Cord	AK
		28T55003F02	AC Cord	AG
		28T40916U01	Plug, AC Cord	UP
		28T41871U01	Plug, AC Cord	J
H1	68	15B58781F01	Housing, Sensor	J
		29A58768F01	Terminal Senser	J
H1	69	65T61618F01	Lamp, Neon	J
G2	70	40T50262F01	Switch, Slide	
G1	71	40T40705T04	Switch Select	UP, AK, AG
G1	72	07A61716F01	Bracket, Select Switch	UP, AK, AG
H6	73	07A58641F01	Bracket, Panel(R)	
F6	74	09T45549F12	Jack Mic 6.3 (Metal)	
F6	75	40T63125F01	Switch Rotary Flex SBU	
F3	76	07C52106F01	Bracket, Front	FR
		07C61799F01	Bracket, Front	FD
B3, C4	77	03S44205G56	Screw, T-Tite M3X25	
H3	78	09T58763F01	Plate, Phono 4P AU	
G2	79	09T53104F01	Socket, Din 8P	
	80	07B44494P01	Shield, OSC	
G3	81	01V59300F76	Ass'y PCB, Pulse OSC	
F7, H7	82	04S40072G08	Washer, Tooth Lock	
B6	83	43A58643F01	Spacer, Side	
D7	83	43A58643F02	Spacer, Side(R)	
E4	84	40T45561F02	Switch Power (SDLIP)	
E4	85	08T57437F09	Capacitor (Ac) 0.01uF	
E4	86	43T53136F01	Bushing, Capacitor TP150-301	
D6	87	03S40012G26	Screw, Tapping M3X6 Flat	
E1	88	03S52360F14	Screw, MCH (M4X8 Flt)	
G1	89	25T61715F01	Trans Power	UP, AK, AG
H1	90	54A40672U01	Label, Select	UP, AK, AG
C6	91	64C58651F01	Panel, Top	
E7	92	64B58646F01	Panel, Side(R)	
D7	93	07A58639F01	Bracket, Side(R)	
B6, E7	94	03S40011G91	Screw, MCH M2.6X5 Bind	
D6	95	36A55392F04	Knob, Slide Switch	
E1	96	03A44642J01	Screw, T-Tite M3X6	UP, AK, AG
F1	96	03S52360F14	Screw, MCH (M4X8 Flt)	UP, AK, AG
H3	97	01V61400F33	Ass'y PCB Out put Switch	
E7	98	26B58647F01	Shield, PCB	
C6, E5	99	03C40014G09	Screw, MCH M3X5	
A6	100	03A52134F01	Screw, Special M3X8.5	
A5	101	61A50712F02	Crystal, Door	
A5	102	07C50704F02	Frame, Door	

Index	Symbol No.	Stock No.	Description	Remarks
A5	102	64A58637F01	Plate,Door	
A6	103	04S40071G11	Washer 3.1×5.9×0.7	
A6	104	02S40000G35	Nut,Hex M3	
B5	105	07B58336F01	Frame,Holder L	
B5	106	07B58337F01	Frame,Holder R	
A6	107	04S40075G11	Washer 3.1×5.4×0.13	
A5, B5	108	43A60304F01	Sleeve,Holder	
		47A52613F01	Shaft,Holder	
A5, B5	109	04C42091G12	Washer "C" 1.2	
B5	110	15B50731F01	Cover, Mechanism	FR
		15B61798F01	Cover, Mechanism	FD
B5	111	03S40012G18	Screw, Tapping M2.6×6	
B5	112	26A56994F01	Shield, Head	
B5	113	61A50736F01	Lens Dust Cover	FR
B6	114	07B50711F01	Bracket,Cassette	
B4	115	03S40012G58	Screw, Tapping M2×5	FR
B4	116	84D60656F08	P.C.B,Cassette LED	FR
B4	117	48T52606F01	LED GREEN TLUG 163	FR
B5	118	54A55965F01	Label, Reflector	FR
A3	119	45B50732F01	Lever Lock	
A3, A4	120	04C42091G04	Washer "C" 3.0	
A2	121	41A62693F01	Spring Lock	FD
A4	121	41A50738F01	Spring Lock	FR
A3	122	44A53019F01	Gear,Damper C	
A3	123	04A41345P01	Washer 1.2×3.5×0.25	
A3	124	44A52924F01	Gear,Damper B	
A3	125	44A52923F01	Gear,Damper A	
A4	126	30S43803G05	Dial Cord	
B3	127	41A60285F01	Spring,Damper	
A4, B3	128	05A44852G02	Eyelet	
B5	129	41A58335F01	Spring,C Pack	
B4	130	47A50720F01	Shaft,Deck	FR
		47A50720F02	Shaft,Deck	FD
A4	131	41A50740F01	Spring,C Lever	
B3	132	01B60948F01	Ass'y,Deck Bracket L	FD
		07C50714F01	Bracket,Deck L	FR
B4	133	07C50715F01	Bracket,Deck R	FR
		07C50715F02	Bracket,Deck R	FD
B4	135	45B50707F01	Lever,Cassette	FR
		45B50707F02	Lever,Cassette	FD
C4	136	03S40012G18	Screw, Tapping M2.6×6	
A7	137	07D58654F01	Frame,Control(A)	
B6	138	36C58652F01	Knob,Logic Control	
B6	139	84D60659F06	P.C.B,Keyboard Switch	
B7	140	36A52475F01	Knob,Rec	
B6	141	61A52484F02	Lens Indicator Play	
B7	142	61A52484F01	Lens Indicator	
B7	143	61A52484F03	Lens Indicator	
C7	144	03S40012G72	Screw, Tapping M2×10 Flat	
B6	145	03S40012G78	Screw, Tapping M2×6	
E4	152	01V61600F18	Ass'y PCB,Lamp	
D4	153	07D55393F01	Frame,Meter	
C4	154	64A55406F02	Panel,Slide Volume	
D5	155	36A55396F02	Knob,Slide Volume	
D5	156	36A52099F02	Knob,Slide	
C4	157	26A58795F01	Shield,Meter Volume	
C4, C5	158	72T50769F02	Meter,Level	
C5	159	64B55395F02	Plate,Meter	

Index	Symbol No.	Stock No.	Description	Remarks
C4	160	75A56279F01	Cushion, Meter	
D4	161	45A50724F01	Lever, Push Switch	
E3	162	03S40011G93	Screw, MCH M3X8	
D3	163	01V61400F41	Ass'y PCB, Volume & Switch	
D5	164	41A58416F01	Spring, Knob	
D5	165	03S40012G63	Screw, Tapping M2×8	
D4	166	03S43997P33	Screw, MCH M2×6	
C4, D4	167	03S40011G99	Screw, MCH M3×5	
E5	168	27C60389F01	Chassis, Front	
A6	183	03S40012G48	Screw, Tapping M3×6	
A4, B4	184	15A60068F01	Guide, Cassette Deck	
D4	185	47A60135F01	Shaft, Stopper	
B3	186	01U59000F48	Assy Mechanism FR87E01A	FR
		01U62000F36	Assy Mechanism FD87P030	FD
B4	187	03S40012G28	Screw, Tapping M3×8	
E7	189	07C55394F02	Frame, Switch & Volume	
D6	191	61A55408F02	Crystal, Meter	
C6	192	36A45474F06	Knob, Eject	
C6	193	07A45558F02	Frame, Eject	
C5	194	45A50719F01	Lever, Eject	
C5	195	41A45559F03	Spring, Eject	
D6	196	07A45557F03	Frame, Power	
C5	197	48T60878F01	LED SLF	FD
A3	198	75A60759F01	Rubber Eject	FD
A3	199	49A52922F01	Wheel Damper	
C7	200	03S40012G07	Screw, Tapping M2×10	
B6	201	04S40070G33	Washer 2.3×6×0.4	
A2	202	45B60675F01	Arm, Eject	FD
A2	203	43A60764F01	Bush, Arm Eject	FD
A2	204	03S44205G34	Screw, T-Tite M2.6×5	FD
C3	205	65T47743F01	FL Counter	
D3	206	01V61400F42	Ass'y PCB, LED	
D3	207	14B60028F01	Rubber, Insulator	
D3	208	45A55404F01	Spacer, Side(R)	
D3	209	61A55425F01	Lens Guide	
C7	210	36A63092F01	Knob Control	

# Exploded View FD Mechanism (New Type)

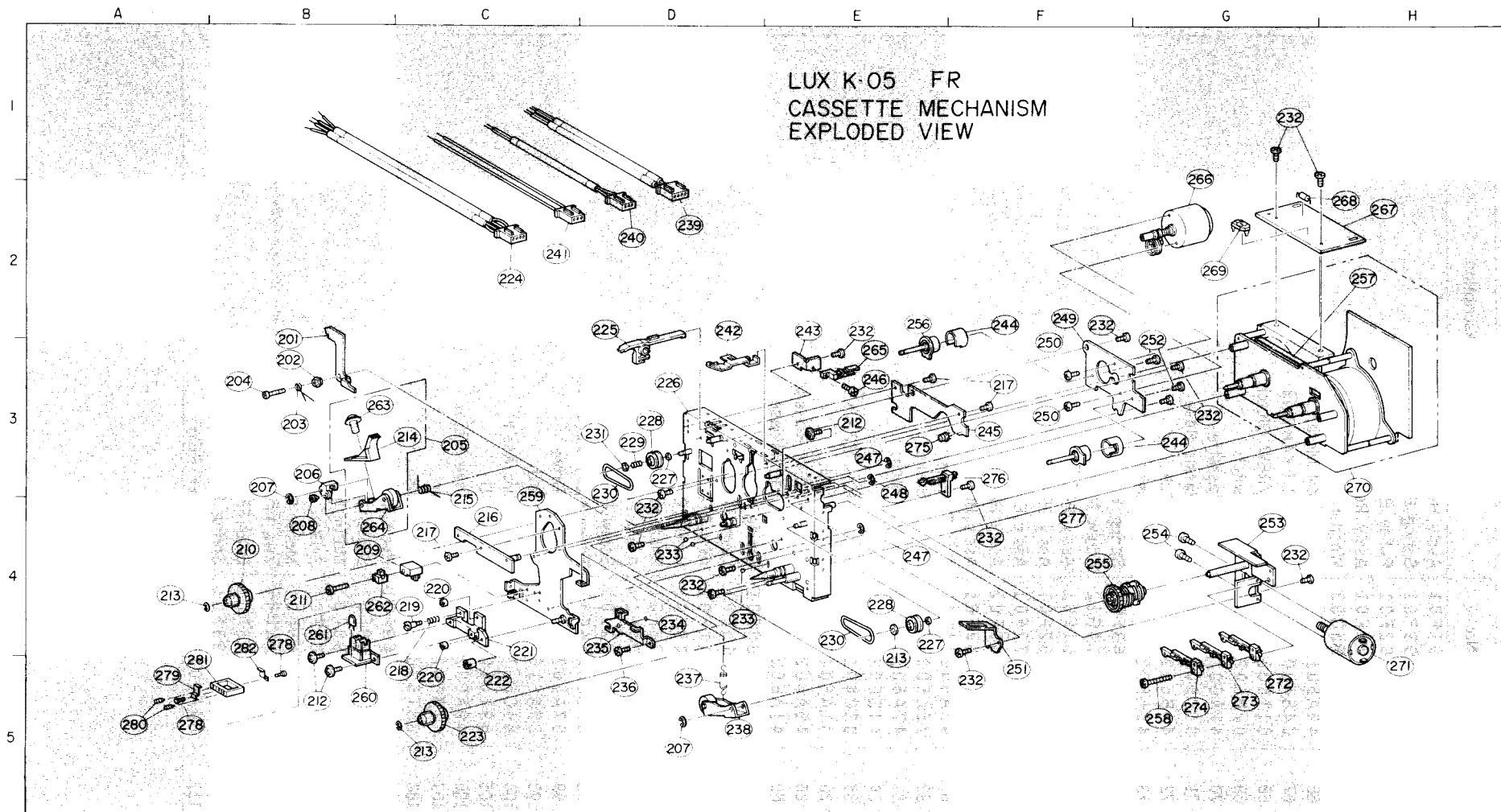


## Exploded View FD Mechanism Parts List (New Type from Serial No. 1251)

Index	Symbol No.	Stock No.	Description	Remarks
A5	1	01A61172F01	Ass'y, Supply Pinchroller	
A5	2	07A60270F01	Bracket, Supply Pinch Adjust	
B7	3	04S40075G12	Washer, 3.1×5.4×0.25	
A5, B7	4	04C42091G05	Washer, C 2.0φ	
B6	5	03A43655U01	Screw, Torque M2×5.5	
A6	6	07A57431F01	Frame, Lifter	
A7	7	03S42155U04	Screw, Set (-) M2×4	
A7	8	45A57432F02	Arm, Lifter	
A6, A7	9	03S52360F16	Screw, MCH M1.7×1.5	
B6	10	15A60255F01	Housing, Erase Head	
B5	11	03S40011G30	Screw, MCH M2×6	
A6	12	03C40014G15	Screw, MCH M2×8	
B6	13	03A43146G01	Screw, MCH M2×6	
B7	14	45A60264F01	Arm, Take up Pinchroller	
B7	15	49A60272F01	Pinchroller	
B6	16	41B60230F04	Spring, Pull	
A5, B7	17	04S40075G07	Washer, 2.1×4×0.5	
A6, B7	18	04C42091G12	Washer, C 1.2φ	
A5	19	45A60265F01	Arm, Supply Pinchroller	
E6	20	04A41345P06	Washer, STW 2.5φ	
A5	21	43A60271F01	Guide, Tape	
A5	22	41B60230F05	Spring, Pull	
A6	23	03C40014G07	Screw, MCH M2×4	
A5	24	49A60272F02	Pinchroller	
A6	25	45A57432F01	Arm, Lifter	
A6	26	02A60263F01	Nut, Azimuth	
B6, G6	27	03C40014G07	Screw, MCH M2×4	
B6	28	02A60838F01	Nut, Stopper	
B6	29	41A60193F03	Spring, Push	
A5	30	03A43655U02	Screw, Torque	
C4	33	47A60262F01	Shaft, Head Azimuth	
C4	35	49A60261F01	Roller, Head Azimuth	
C5	36	44A60258F01	Gear, Head Base-B	
C7	37	45A60797F01	Arm, Eject Stopper	
C7	38	41A60801F01	Spring, Eject Stopper	
C6, C7	39	43A60798F01	Spacer, Screw	
C6, C7	40	03S44205G33	Screw, T-Tite M2.6×8	
D6	41	41A60268F01	Spring, B.T.	
C6	42	45A60266F01	Arm, Back Tension	
C6	43	04A41345P04	Washer, 2.6×6×0.25	
B5	44	41A60193F04	Spring, Push	
B4	45	44A60257F01	Gear, Head Base-A	
D4	46	04C42091G12	Washer, C 1.2φ	
C6, C7	47	03S44205G34	Screw, T-Tite M2.6×5	
B5, C5	48	43A41182P01	Ball, Steel 2	
B6	49	15A60273F01	Housing, R/P Head	
B7	50	01A61171F01	Ass'y, Take up Pinchroller	
D4	52	45A60754F01	Arm, Push	
D4	53	45A60330F01	Arm, Rec	
D5	54	41A60758F01	Spring, Rec	
D5	55	47A62007F01	Shaft, Switch Push	
D7	56	04S40075G02	Washer, 1.7×3.2×0.13	
C6	57	41B60230F02	Spring, Pull	
C7	58	01A60208F01	Ass'y, Lever Play	
D7	59	49A60209F01	Roller, Play Idler	
B5, C6	60	41A60193F05	Spring, Push	

Index	Symbol No.	Stock No.	Description	Remarks
C4	61	01A60897F01	Ass'y, Head Base	
E3, G4	62	41A60193F01	Spring, Push	
E3, G4	63	49A60192F01	Pulley, Back Tension	
E3, G5	64	01T62785F01	Ass'y, Reel Supply	
D4, F5	65	04S40075G03	Washer, 1.7×3.2×0.25	
E4	66	49A60191F01	Pulley, Reel Motor	
E4, F3	67	04S40075G05	Washer, 2.1×4×0.13	
F4	68	01T60835F01	Ass'y, FF/REW Clutch	
E5	69	07B60755F01	Frame, Switch	
C5	70	41A60222F01	Spring, Cassette	
E7	71	01C60223F01	Ass'y, Chassis Base	
D7	72	41B60230F03	Spring, Pull	
D7	73	45A60217F01	Arm, Pause	
D7	74	41A60269F01	Spring, Ball	
C7, F3	75	03C40014G12	Screw, MCH M2.6×4	
G1	76	01T60761F01	Ass'y, Head Cable P	
F1	77	01T60762F01	Ass'y, Head Cable E	
F1	78	01T62672F01	Ass'y, Erase Wire	
F2	79	01T60761F02	Ass'y, Head Cable R	
F3	80	01A60187F01	Ass'y, Bracket Reel	
E5	81	45A60214F01	Arm, Brake L	
E5, E6	82	75A60213F01	Rubber, Brake	
E5	83	47A60756F01	Shaft, Switch	
F5	84	44B60220F01	Gear, Drive Cam	
E6	85	03C40121T10	Screw, MCH M2.6×5	
A5	86	41A60193F05	Spring, Push	
F5	88	45A60216F01	Arm, FF/REW Release	
E5	89	41A60231F01	Spring, F/R Release	
E5	90	41B60230F01	Spring, Pull	
F6	91	45A60215F01	Lever, Brake	
E6	92	45A60212F01	Arm, Brake R	
F6	93	44A60219F01	Worm, Drive	
F6	94	47A60218F01	Shaft, Worm Gear	
F2	96	01V63300F19	Ass'y, Panel Sensor	
C1	97	03A43852J02	Screw, FT M2.5×5	
G5	98	03C40014G31	Screw, MCH M2.6×10	
G6	99	07A60204F01	Bracket, Drive	
B1	103	30A61681F01	C.W. Shield	
C1	104	84C60794F01	Panel, Wire Ass'y	
B2	105	59T61067F01	Motor, DD	
G6	106	49A60207F01	Pulley, Drive Motor	
G7	107	42A60221F01	Belt, Drive	
A6	108	88T52095F01	Head, Erase	
B6	109	88T58769F01	Head, R/P Combi	
D4, E5	110	40T60329F01	Switch, Leaf	
G2	111	59T60190F01	Motor, Reel	
G5	112	40T60206F01	Switch, Rotary Encoder	
G5	113	59T60205F01	Motor, Drive	
F4	114	45A60195F01	Arm, FF/REW	
F4	115	44A60198F01	Gear, FF/REW	
E4	116	41A60193F01	Spring, Push	
E4	117	04A60199F01	Washer, FF/REW	

## Exploded View FR Mechanism (Old Type)

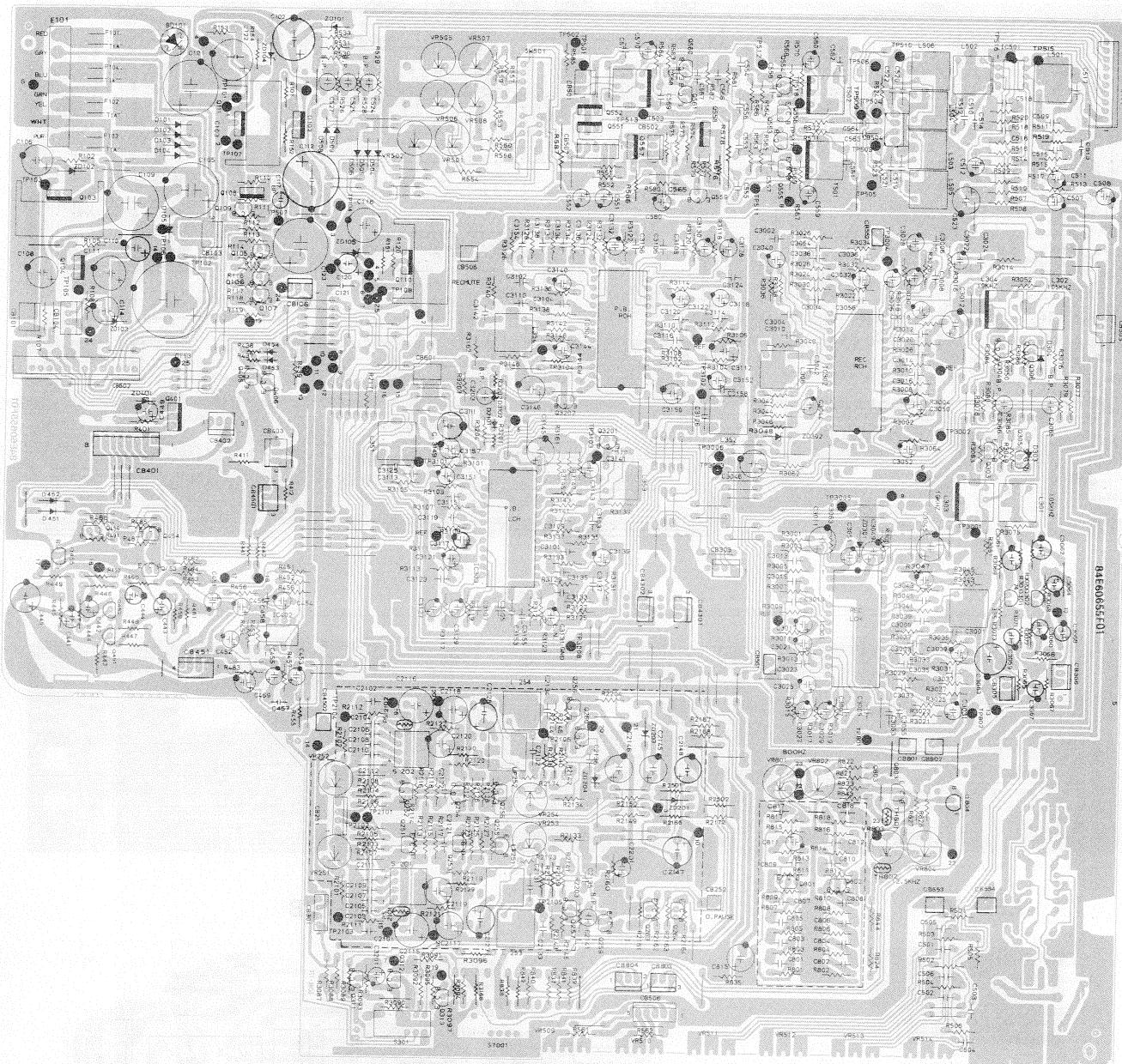


## Exploded View FR Mechanism Parts List (Old Type up to Serial No. 1250)

Index	Symbol No.	Stock No.	Description	Remarks
B2	201		Lock, Lever	
B3	202	43E00049S01	Spacer	
B3	203	41E00050S01	Spring, Pull	
B3	204		Screw, Pan M2.5×10	
C3	205	01E00044S01	Ass'y, Supply Pinchroller	
B3	206	07E00047S01	Support, Pinchroller	
B3, D5	207	04C42091G05	Washer, E M2	
B4	208	03E00109S02	Screw, Set (-) M2×3	
B4	209	46E00026S01	Block, Erase Head	
B4	210	49E00040S01	Reel, Supply	
B4	211	03E00027S01	Screw, M2×20	
B5	212	03C40014G07	Screw, M2×4	
A4, C5	213	04E00062S02	Washer	
C3	214	43E00194S01	Guide, Tape	
C4	215	41E00046S01	Spring, Pinchroller	
C4	216	01E00020S01	Ass'y, Connection Bracket	
C4, F3	217	03E00108S01	Screw, Pan M2.5×4	
C5	218	41E00022S01	Spring, Adjustment	
C4	219	03E00023S01	Screw	
C4, C5	220	03E00109S01	Screw, Set (-) M2×4	
C5	221	46E00021S01	Block, R/P Head	
C5	222	02E00024S01	Nut	
C5	223	49E00039S01	Reel, Take up	
C2	224	01E00056S01	Cable, Connector Rec 4P	
D2	225	45E00052S01	Lever, Record	
D3	226		Ass'y, Chassis Rivet	
D3, E4	227	04E00062S03	Washer	
D3, E4	228	49E00041S01	Pulley	
D3	229	41E00061S01	Spring, Pull	
D3, E4	230	42E00042S01	Belt, Reel	
D3	231	04E00062S01	Washer, Flat	
D4, E2	232	03A43852J02	Screw, Pan M2.5×5	
D4	233	43E00028S01	Ball, Steel M2	
D4	234	43E00028S02	Ball, Steel M3	
D4	235	41E00029S01	Spring, Head Base	
D5	236	03S40011G21	Screw, Pan M3×4	
D5	237	41E00045S01	Spring, Pull	
D5	238	01E00043S01	Ass'y, Pinchroller	
D2	239	01E00057S01	Cable, Connector P/B 4P	
D2	240	01E00058S01	Cable, Connector E 3P	
C2	241	01E00059S01	Cable, Connector Thermistor	
D2	242	41E00033S01	Spring, Cassette Guide	
E2	243		Bracket, Leaf Switch	
F2, G3	244	15E00031S01	Case, Reel	
F3	245	01E00018S01	Ass'y, Sensor PCB	
E3	246		Screw, Pan M2.5×6	
E3, E4	247	04C42091G04	Ring, E M3	
E3	248	04C42091G11	Ring, E M2.5	
F2	249		Bracket, Motor	
F3	250	03S43997P36	Screw, Bind M2.6×3	
F5	251		Guide, Bracket	
G3	252	03E00110S01	Screw, Bind M2.6×4	
G4	253		Ass'y, Pad Bracket	
G4	254	03E00111S01	Screw, Pan M2×3	
F4	255	44E00036S01	Cam, Gear	
E2	256	25E00032S01	Coil, Reel	

Index	Symbol No.	Stock No.	Description	Remarks
H2	257	42E00112S01	Belt	
G5	258	03E00108S03	Screw, Pan M2.5×20	
C4	259	01E00019S01	Ass'y, Head Base Rivet	
B5	260	88T58769F01	Head, R/P Combi	
B4	261	48E00121S01	Termistor	
B4	262	88T52095F01	Head, Erase	
B3	263		Screw	
B4	264		Pinchroller	
E3	265	40E00054S01	Switch, Leaf	
H2	267	01E00055S01	Ass'y, Terminal PCB	
H2	268	48E00114S01	Diode, S5277B	
G2	269	18E00116S01	Semi VR 20KB	
H3	270	59E00038S01	Ass'y, DD Motor	
H5	271	59E00035S01	Ass'y, Pad Motor	
G5	272	40E00037S01	Switch, Leaf	
G5	273	40E00037S01	Switch, Leaf	
G5	274	40E00037S01	Switch, Leaf	
E3	275	48E00217S01	LED, Sensor	
F3	276	40E00053S01	Switch, Leaf	
F4	277	25E00032S01	Coil, Reel	
A5, B4	278	03S52360F16	Screw, Pan M1.7×1.5	
A5	279	45A57432F01	Arm, Lifter	
A5	280	03S42155U01	Screw, Set (-) M2×5	
A5	281	07A57431F01	Frame, Lifter	
B5	282	45A57432F02	Arm, Lifter	

# PCB



Lamp PCB



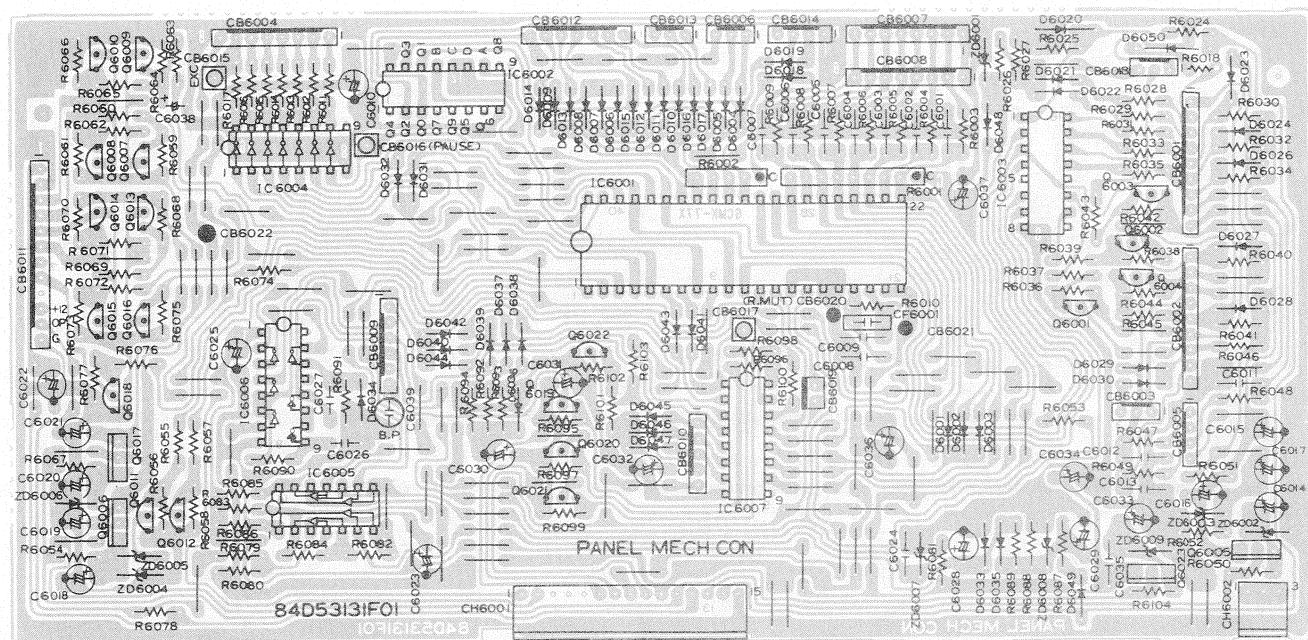
## Remarks

Resistor: Rd... Carbon, Rm... Metal Film

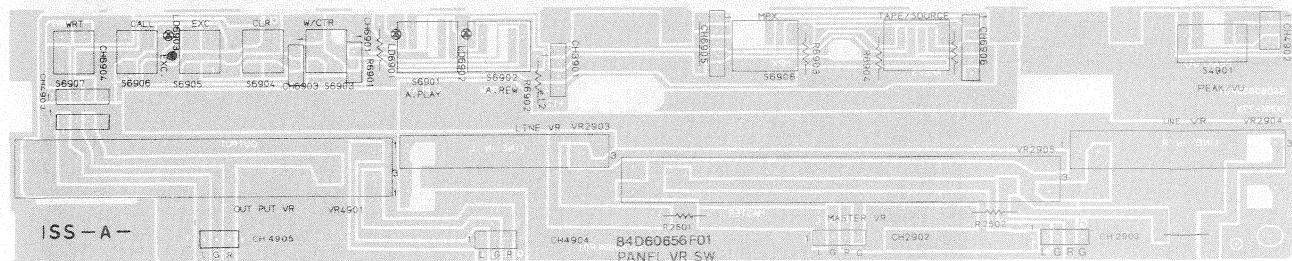
Capacitor: El... Electrolytic, Ce... Ceramic, My... Mylar

Mi... Mica, Ac... AC, Tf... TF, Pp... Polypropylene,  
Ta... Tantalum

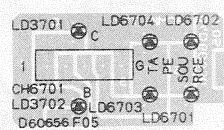
## Control PCB



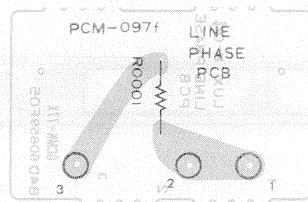
## SW & VR PCB



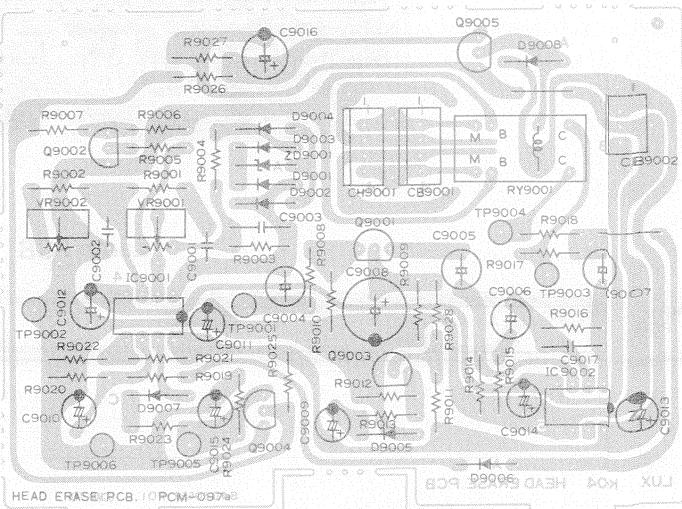
## LED PCB



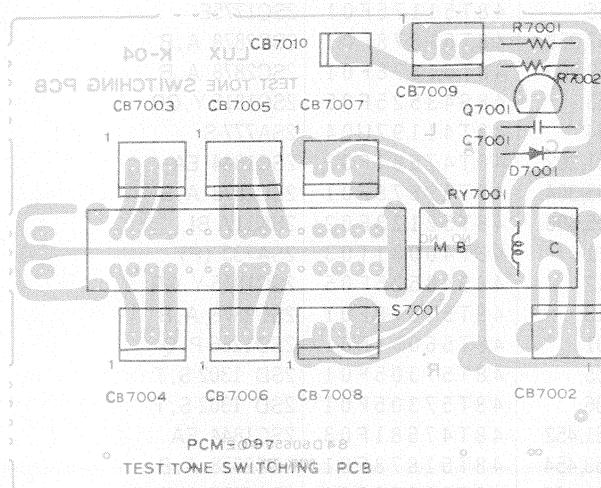
## Line Sensor PCB



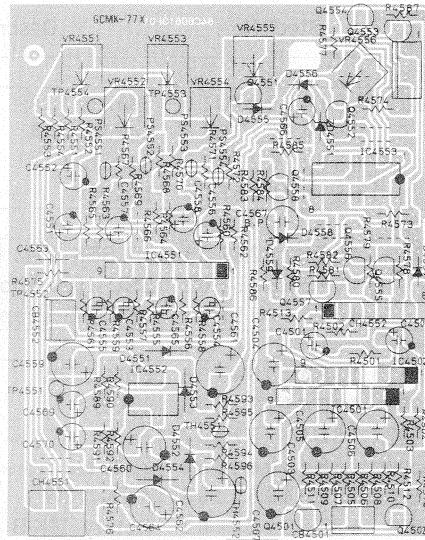
## Auto Erase PCB



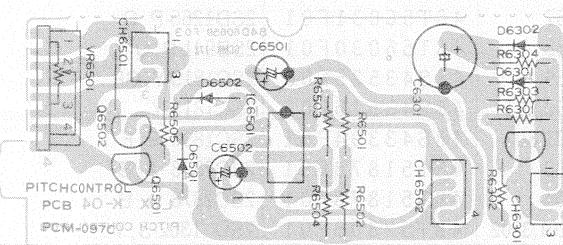
## Output SW PCB



## Head Phone & Meter PCB

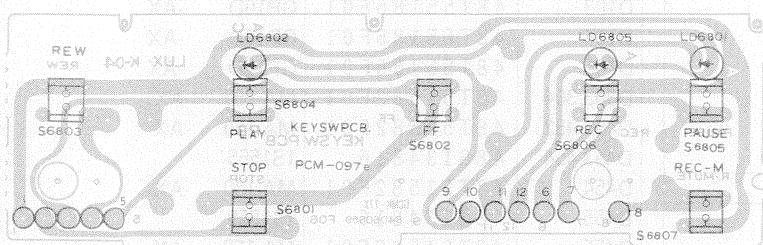


## Pitch Control PCB



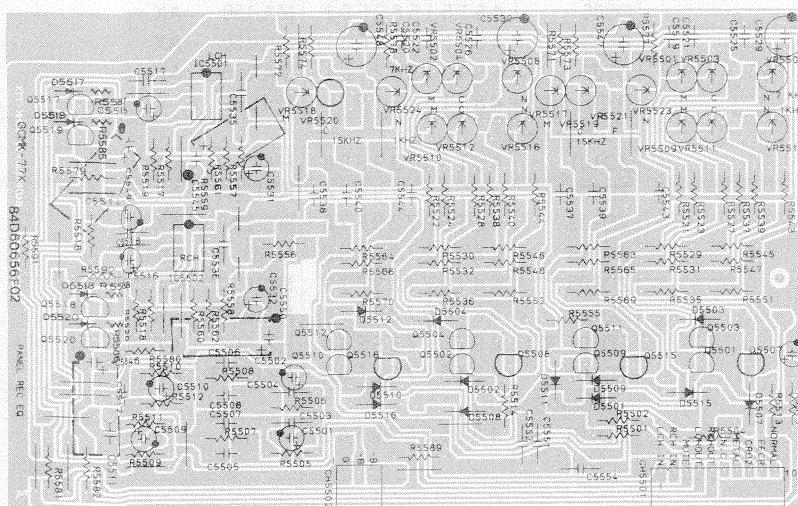
## Timer SW PCB

## Key Board SW PCB



## Pulse OSC PCB

REC EQ PCB



# PCB Parts List

## Master PCB Parts List

Symbol No.	Stock No.	Description
(Fuse)		
F101,102	65T42077U16	Semko T-1A (UP,AK,AG)
F103	65T42077U16	Semko T-1A (UP,AK,AG)
F104	65T42077U16	Semko T-1A (UP,AK,AG)
F104	65T57086F04	1A-250V (J)
(Switch)		
S201,202	40T52528F01	4P SGK 1042 [PB EQ]
S301	40T55386F02	SBU 1023 [Dolby]
S501	40T56475F01	SSR244S [Tape select]
(Variable Resistor)		
VR251,252	18B44064J06	680K 1/2W
VR253,254	18C41732G06	10K-B
VR501,502	18C41732G07	1K-B
VR505,506	18B44064J08	2.2K-1/2
VR507,508	18B44064J02	4.7K-1/2W
VR509,510	18T63123F01	Rotary 10K-B [Bias]
VR511,512	18T63123F01	Rotary 10K-B [Level]
VR513,514	18T63124F01	Rotary 100K-A [EQ]
VR801,802	18C41732G09	47K
VR803,804	18C41732G09	47K
(Trans,OSC)		
T501	25T56004F01	OSC
T502	25T56004F01	OSC
T503	25T56004F01	OSC
(Coil)		
L251,252	24T61233F01	Trap WITHC
L253,254	24T51914F02	Trap 10mH
L301,302	91T44717P01	105B
L303,304	91T44717P02	19B
L305,306	24T52159F01	36mH
L351,352	24T51914F01	Trap 4.7mH
L353,354	24T52159F01	36mH
L501,502	24T51914F01	Trap 4.7mH
L503,504	24T51914F01	Trap 4.7mH
L505,506	24T51914F02	Trap 10mH
(IC)		
IC301,302	51T52160F01	HA12038-01
IC303,304	51T52160F01	HA12038-01
IC402	51T51173F01	UPC4556C
IC501	51S43471U02	UPC4558C
(Transistor & FET)		
Q15	48T41197U04	2SA777-S
Q102	48T56031F01	2SD1266-P,Q
Q103	48T56031F01	2SD1266-P,Q
Q104	48T56030F01	2SB941-P,Q
Q106	48S43525F05	2SC1815-Y,GR
Q107	48S43525F05	2SC1815-Y,GR
Q108	48T56030F01	2SB941-P,Q
Q109	48S43525F05	2SC1815-Y,GR
Q110	48T56031F01	2SD1266-P,Q
Q111	48T56029F01	2SD1276-P,Q
Q251	48T47681F03	2SC1844 EA
Q252	48T47681F03	2SC1844 EA
Q253	48S47729F02	2SK117 BL
Q254	48T52123F02	2SK117 BL
Q255	48T51175F01	2SC1775E

Symbol No.	Stock No.	Description	
Q256	48T51175F01	2SC1775E	
Q257,258	48T51878F01	2SC2878 A,B	
Q259,260	48T51878F01	2SC2878 A,B	
Q263	48S43525F05	2SC1815-Y,GR	
Q264	48T41197U04	2SA777-S	
Q301,302	48T47681F03	2SC1844 EA	
Q303,304	48T51878F01	2SC2878 A,B	
Q305,306	48T52123F02	2SK117 BL	
Q311	48T40081T03	2SA733 (P)	
Q312	48S43525F05	2SC1815-Y,GR	
Q313	48T51878F01	2SC2878 A,B	
Q401	48T56031F01	2SD1266-P,Q	
Q405	48T57305F01	2SD 1302-S,T	
Q406	48T57305F01	2SD 1302-S,T	
Q451,452	48T47681F03	2SC1844 EA	
Q453,454	48T51878F01	2SC2878 A,B	
Q455,456	48T51878F01	2SC2878 A,B	
Q551,552	48T56029F01	2SD1276-P,Q	
Q553,554	48S43525F02	2SC1815-Y	
Q555,556	48S43525F02	2SC1815-Y	
Q557	48T56031F01	2SD1266-P,Q	
Q558	48T56030F01	2SB941-P,Q	
Q559	48S43525F05	2SC1815-Y,GR	
Q560,561	48S43525F02	2SC1815-Y	
Q801,802	48S43394P01	2SC1890 E,F	
Q803	48T51878F01	2SC2878 A,B	
Q804	48T51878F01	2SC2878 A,B	
Q3201,3202	48T57305F01	2SD 1302-S,T	
(Diode)			
D101	48T55186F01	GP10D -AX	
D102	48T55186F01	GP10D -AX	
D103	48T55186F01	GP10D -AX	
D104	48T55186F01	GP10D -AX	
D105	48T55186F01	GP10D -AX	
D303,304	48T51582F01	MA-150 -AX	
D451,452	48T51582F01	MA-150 -AX	
D453,454	48S134816	1S1555	
D454	48T51582F01	MA-150 -AX	
D455	48S134816	1S1555	
D455	48T51582F01	MA-150 -AX	
D504	48T51582F01	MA-150 -AX	
D505	48T51582F01	MA-150 -AX	
D506	48T51582F01	MA-150 -AX	
D508	48T51582F01	MA-150 -AX	
D509	48T51582F01	MA-150 -AX	
D3101,3102	48S134816	1S1555	
(Diode,Zener)			
ZD101	48T52739F90	HZ22 -3 -AX	
ZD102	48T52739F74	HZ12B-2 -AX	
ZD103	48T52739F70	HZ12A-1 -AX	
ZD104	48T52739F90	HZ22 -3 -AX	
ZD105	48T52739F79	HZ16 -1 -AX	
ZD201	48T52739F74	HZ12B-2 -AX	
ZD301,302	48T52739F40	HZ 6C-1 -AX	
ZD401	48T52739F66	HZ11B-3 -AX	
(Diode,Bridge)			
BD101	48T50629F01	WL-02	

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
(Posistor)					
PS2101,2102	48T56034F01	471	C570	23S40657F18	(EI) 22uF 25V
(Thermistor)					
TH801,802	48S42931U34	10K	C571	08T52448F21	(Pp) 2200pF
TH5001	48T57369F15	5KOhm	C580	23S40657F17	(EI) 10uF 25V
(Capacitor)					
C101	23S41198U73	(EI) 2200uF 35V	C801	08T52448F31	(Pp) 5600pF
C102	23S41198U57	(EI) 470uF 25V	C802	08T52448F04	(Pp) 0.00043uF
C105	23S41198U72	(EI) 2200uF 25V	C803	08T52448F31	(Pp) 5600pF
C106	23S41198U56	(EI) 470uF 16V	C804	08T52448F04	(Pp) 0.00043uF
C108	23S41198U56	(EI) 470uF 16V	C805	08T52448F31	(Pp) 5600pF
C109	23S41198U72	(EI) 2200uF 25V	C806	08T52448F04	(Pp) 0.00043uF
C110	23S41198U49	(EI) 330uF 25V	C807	08T52448F31	(Pp) 5600pF
C111	23S41198U57	(EI) 470uF 25V	C808	08T52448F04	(Pp) 0.00043uF
C112	23S41198U72	(EI) 2200uF 25V	C809	08T52448F31	(Pp) 5600pF
C113	23T58450F01	(EI) 6800uF 25V	C810	08T52448F13	(Pp) 1000pF
C114	23S41198U41	(EI) 220uF 16V	C811	23S41059P21	(Ta) 6.8uF 6.3V
C115	23S41198U77	(EI) 3300uF 25V	C812	08T57851F11	(Tf) 0.068uF
C116	23S41198U57	(EI) 470uF 25V	C815	23S40657F21	(EI) 100uF 25V
C117	23T42477F16	(EI) 1.0uF 50V	C817	08T52448F21	(Pp) 2200pF
C120	23T43197F18	(EI) 10uF 25V	C818	08T42081U01	(Pp) 100pF
C121	08T61407F01	(Ac) 0.22uF 125V	C2101,2102	08T55119F34	(Mi) 100pF
C123	23S41198U72	(EI) 2200uF 25V	C2103,2104	08T55119F18	(Mi) 30pF
C441,442	23T43197F05	(EI) 4.7uF 25V	C2105,2106	08T55119F28	(Mi) 56pF
C443	23S40657F17	(EI) 10uF 25V	C2107,2108	08T55119F30	(Mi) 68pF
C444	23S41198U12	(EI) 10uF 50V	C2109,2110	08T55119F32	(Mi) 82pF
C445	23S41198U35	(EI) 100uF 25V	C2111,2112	08T42081U19	(Pp) 560pF
C449	23T43197F11	(EI) 220uF 16V	C2115,2116	23T43197F25	(EI) 330uF 10V
C451,452	23T42478F24	(EI) 1.0uF 50V	C2117,2118	23T43197F07	(EI) 22uF 16V
C453,454	23S40657F13	(EI) 47uF 16V	C2119,2120	23S40657F08	(EI) 100uF 10V
C455,456	23S40657F21	(EI) 100uF 25V	C2121,2122	08T52448F31	(Pp) 5600pF
C457	21S40655F23	(Ce) 100pF	C2127,2128	23T43197F11	(EI) 220uF 16V
C458	21C45322G22	(Ce) 100pF 50V	C2131,2132	08S44505P41	(Ce) 220pF
C469	23S40657F21	(EI) 100uF 25V	C2133,2134	08T57851F09	(Tf) 0.047uF
C501,502	08T52448F01	(Pp) 0.00033uF	C2135,2136	08T52448F37	(Pp) 10000pF
C503,504	08T52448F19	(Pp) 1800pF	C2141	23T42477F11	(EI) 10uF 25V
C505,506	08T42081U09	(Pp) 220pF	C2145,2146	23T43197F13	(EI) 100uF 25V
C507,508	23T43197F02	(EI) 1uF 50V	C2148	23T43197F11	(EI) 220uF 16V
C509,510	08T52448F33	(Pp) 6800pF	C2201	23S40657F11	(EI) 22uF 16V
C511,512	23S40657F10	(EI) 10uF 16V	C3001,3002	08T57851F12	(Tf) 0.082uF
C513,514	08T57851F07	(Tf) 0.033uF	C3003,3004	08T57851F15	(Tf) 0.15uF
C515,516	08T52448F25	(Pp) 3300pF	C3005,3006	08T57851F19	(Tf) 0.33uF
C517,518	08T57851F15	(Tf) 0.15uF	C3007,3008	08T57851F19	(Tf) 0.33uF
C519,520	08S44505P41	(Ce) 220pF	C3009,3010	08T50579F21	(Tf) 0.47uF
C521,522	08S44505P45	(Ce) 470pF	C3011,3012	23T43197F14	(EI) 220uF 10V
C522,523	23T43197F20	(EI) 220uF 25V	C3013,3014	08T52448F41	(Pp) 15000pF
C524,525	23T42477F09	(EI) 4.7uF 25V	C3015,3016	08T52448F41	(Pp) 15000pF
C527	23T42477F09	(EI) 4.7uF 25V	C3017,3018	23T42478F05	(EI) 10uF 16V
C551,552	23S40657F17	(EI) 10uF 25V	C3019,3020	08T52448F37	(Pp) 10000pF
C553,554	08T52448F21	(Pp) 2200pF	C3021,3022	23T42478F09	(EI) 4.7uF 25V
C555,556	08T52448F21	(Pp) 2200pF	C3023,3024	08T52448F43	(Pp) 18000pF
C557,558	08T52448F34	(Pp) 7500pF	C3025,3026	23T43197F09	(EI) 47uF 16V
C559,560	23S40657F31	(EI) 4.7uF 50V	C3027,3028	23T42478F24	(EI) 1.0uF 50V
C561,562	08T52448F19	(Pp) 1800pF	C3029,3030	23T42478F24	(EI) 1.0uF 50V
C563,564	08S44505P41	(Ce) 220pF	C3031,3032	23T42478F05	(EI) 10uF 16V
C565	08S44505P61	(Ce) 10000pF	C3033,3034	08T52448F13	(Pp) 1000pF
C566,567	08T52448F25	(Pp) 3300pF	C3035,3036	08T52448F27	(Pp) 3900pF
C568,569	08T52448F37	(Pp) 10000pF	C3037,3038	08T52448F25	(Pp) 3300pF
			C3039,3040	23T42478F09	(EI) 4.7uF 25V
			C3041,3042	08T52448F19	(Pp) 1800pF
			C3043,3044	23T43197F09	(EI) 47uF 16V

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
C3045,3046	2 3 T 4 3 1 9 7 F 2 3	(EI) 470uF 16V	R308,309	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W
C3049,3050	2 3 T 4 3 1 9 7 F 2 2	(EI) 100uF 10V	R401	0 6 S 4 4 5 9 3 P 5 7	(Rd) 470Ω 1/4W
C3051,3052	2 3 T 4 3 1 9 7 F 0 2	(EI) 1uF 50V	R437,438	0 6 S 4 4 5 9 3 P 7 7	(Rd) 3.3KΩ 1/4W
C3053,3054	0 8 S 4 4 5 0 5 P 2 7	(Ce) 39pF	R439	0 6 S 4 4 5 9 4 P 1 8	(Rd) 150KΩ 1/4W
C3055,3056	0 8 T 5 2 4 4 8 F 3 1	(Pp) 5600pF	R441,442	0 6 S 4 4 5 9 3 P 6 5	(Rd) 1KΩ 1/4W
C3059,3060	2 3 T 4 3 1 9 7 F 2 4	(EI) 22uF 25V	R443,444	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W
C3061,3062	2 3 T 4 3 1 9 7 F 1 1	(EI) 220uF 16V	R445,446	0 6 S 4 4 5 9 4 P 3 4	(Rd) 680KΩ 1/4W
C3063,3064	2 3 T 4 3 1 9 7 F 1 3	(EI) 100uF 25V	R447,448	0 6 S 4 4 5 9 3 P 8 1	(Rd) 4.7KΩ 1/4W
C3065,3066	2 3 T 4 2 4 7 7 F 1 6	(EI) 1.0uF 50V	R449,450	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
C3067,3068	2 3 T 4 3 1 9 7 F 1 7	(EI) 4.7uF 50V	R451,452	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W
C3101,3102	0 8 T 5 7 8 5 1 F 1 2	(Tf) 0.082uF	R453,454	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W
C3103,3104	0 8 T 5 7 8 5 1 F 1 5	(Tf) 0.15uF	R455,456	0 6 S 4 4 5 9 3 P 5 7	(Rd) 470Ω 1/4W
C3105,3106	0 8 T 5 7 8 5 1 F 1 9	(Tf) 0.33uF	R457,458	0 6 S 4 4 5 9 3 P 9 5	(Rd) 18KΩ 1/4W
C3107,3108	0 8 T 5 7 8 5 1 F 1 9	(Tf) 0.33uF	R459,460	0 6 S 4 4 5 9 3 P 8 2	(Rd) 5.1KΩ 1/4W
C3109,3110	0 8 T 5 0 5 7 9 F 2 1	(Tf) 0.47uF	R461,462	0 6 S 4 4 5 9 3 P 4 6	(Rd) 160Ω 1/4W
C3111,3112	2 3 T 4 3 1 9 7 F 1 4	(EI) 220uF 10V	R463,464	0 6 S 4 4 5 9 4 P 0 6	(Rd) 47KΩ 1/4W
C3113,3114	0 8 T 5 2 4 4 8 F 4 1	(Pp) 15000pF	R485	0 6 S 4 4 5 9 4 P 3 8	(Rd) 1MΩ 1/4W
C3115,3116	0 8 T 5 2 4 4 8 F 4 1	(Pp) 15000pF	R486	0 6 S 4 4 5 9 4 P 1 4	(Rd) 100KΩ 1/4W
C3117,3118	2 3 T 4 2 4 7 8 F 0 5	(EI) 10uF 16V	R487	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
C3119,3120	0 8 T 5 2 4 4 8 F 3 7	(Pp) 10000pF	R491	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
C3121,3122	2 3 T 4 2 4 7 8 F 0 9	(EI) 4.7uF 25V	R501,502	0 6 S 4 4 5 9 3 P 8 5	(Rd) 6.8KΩ 1/4W
C3123,3124	0 8 T 5 2 4 4 8 F 4 3	(Pp) 18000pF	R503,504	0 6 S 4 4 5 9 4 P 0 8	(Rd) 56KΩ 1/4W
C3125,3126	0 8 S 4 4 5 0 5 P 4 5	(Ce) 470pF	R505,506	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W
C3127,3128	2 3 T 4 2 4 7 8 F 2 4	(EI) 1.0uF 50V	R507,508	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W
C3129,3130	2 3 T 4 2 4 7 8 F 2 4	(EI) 1.0uF 50V	R509,510	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W
C3131,3132	2 3 T 4 2 4 7 8 F 0 5	(EI) 10uF 16V	R511,512	0 6 S 4 4 5 9 3 P 5 3	(Rd) 330Ω 1/4W
C3133,3134	0 8 T 5 2 4 4 8 F 1 3	(Pp) 1000pF	R513,514	0 6 S 4 4 5 9 3 P 8 7	(Rd) 8.2KΩ 1/4W
C3135,3136	0 8 T 5 2 4 4 8 F 2 7	(Pp) 3900pF	R515,516	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W
C3137,3138	0 8 T 5 2 4 4 8 F 2 5	(Pp) 3300pF	R517,518	0 6 S 4 4 5 9 3 P 9 5	(Rd) 18KΩ 1/4W
C3139,3140	2 3 T 4 2 4 7 8 F 0 9	(EI) 4.7uF 25V	R519,520	0 6 S 4 4 5 9 4 P 1 0	(Rd) 68KΩ 1/4W
C3141,3142	0 8 T 5 2 4 4 8 F 1 9	(Pp) 1800pF	R523,524	0 6 S 4 4 5 9 3 P 0 1	(Rd) 2.2Ω 1/4W
C3143,3144	2 3 T 4 3 1 9 7 F 0 9	(EI) 47uF 16V	R526	0 6 S 4 4 5 9 3 P 8 1	(Rd) 4.7KΩ 1/4W
C3145,3146	2 3 T 4 3 1 9 7 F 2 3	(EI) 470uF 16V	R528	0 6 S 4 4 5 9 3 P 8 1	(Rd) 4.7KΩ 1/4W
C3149,3150	2 3 T 4 3 1 9 7 F 2 2	(EI) 100uF 10V	R529	0 6 S 4 4 5 9 3 P 8 1	(Rd) 4.7KΩ 1/4W
C3151,3152	2 3 T 4 3 1 9 7 F 0 2	(EI) 1uF 50V	R530	0 6 S 4 4 5 9 4 P 1 4	(Rd) 100KΩ 1/4W
C3153,3154	0 8 S 4 4 5 0 5 P 2 7	(Ce) 39pF	R531	0 6 S 4 4 5 9 4 P 1 4	(Rd) 100KΩ 1/4W
C3155,3156	0 8 T 5 2 4 4 8 F 3 1	(Pp) 5600pF	R533	0 6 S 4 4 5 9 4 P 1 4	(Rd) 100KΩ 1/4W
C3157,3158	0 8 S 4 4 5 0 5 P 4 5	(Ce) 470pF	R551,552	0 6 S 4 4 5 9 3 P 7 3	(Rd) 2.2KΩ 1/4W
C3201	2 3 S 4 0 6 5 7 F 1 0	(EI) 10uF 16V	R553,554	0 6 S 4 4 5 9 3 P 5 9	(Rd) 560Ω 1/4W
C3203	2 3 T 4 2 4 7 7 F 0 9	(EI) 4.7uF 25V	R557,558	0 6 S 4 4 5 9 3 P 5 9	(Rd) 560Ω 1/4W
(Resistor)			R559,560	0 6 S 4 4 5 9 3 P 6 5	(Rd) 1KΩ 1/4W
R101	0 6 S 4 4 5 9 3 P 8 8	(Rd) 9.1KΩ 1/4W	R561,562	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W
R102	0 6 S 4 4 5 9 3 P 6 3	(Rd) 820Ω 1/4W	R563,564	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
R105	0 6 S 4 4 5 9 3 P 5 7	(Rd) 470Ω 1/4W	R565,566	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
R107,108	0 6 S 4 4 5 9 3 P 5 7	(Rd) 470Ω 1/4W	R567,568	0 6 S 4 4 5 9 3 P 2 5	(Rd) 22Ω 1/4W
R110	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W	R569,570	0 6 S 4 4 5 9 3 P 2 5	(Rd) 22Ω 1/4W
R111	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W	R571,572	0 6 S 4 4 5 9 3 P 4 1	(Rd) 100Ω 1/4W
R112	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R573	0 6 S 4 4 5 9 3 P 8 1	(Rd) 4.7KΩ 1/4W
R113	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R574	0 6 S 4 4 5 9 3 P 6 3	(Rd) 820Ω 1/4W
R114	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W	R575	0 6 S 4 4 5 9 4 P 0 5	(Rd) 43KΩ 1/4W
R115	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R576	0 6 S 4 4 5 9 3 P 5 1	(Rd) 270Ω 1/4W
R116	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W	R577	0 6 S 4 4 5 9 4 P 0 2	(Rd) 33KΩ 1/4W
R117	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R578	0 6 T 5 5 1 7 9 F 5 1	(Rm) 270Ω 2W
R118	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R579,580	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W
R119	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W	R581,582	0 6 S 4 4 5 9 3 P 9 7	(Rd) 22KΩ 1/4W
R120	0 6 S 4 4 5 9 3 P 7 9	(Rd) 3.9KΩ 1/4W	R583,584	0 6 S 4 4 5 9 3 P 2 1	(Rd) 15Ω 1/4W
R151	0 6 S 4 4 5 9 3 P 9 9	(Rd) 27KΩ 1/4W	R585	0 6 C 4 3 2 0 5 J 0 1	(Rm) 0.5Ω 1/2W
R153	0 6 S 4 4 5 9 3 P 8 8	(Rd) 9.1KΩ 1/4W	R586	0 6 S 4 4 5 9 3 P 9 2	(Rd) 13KΩ 1/4W

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
R587	06T55179F49	(Rm) 220Ω 2W	R3015,3016	06S44594P14	(Rd) 100KΩ 1/4W
R801,802	06S44593P99	(Rd) 27KΩ 1/4W	R3017,3018	06S44594P38	(Rd) 1MΩ 1/4W
R803	06S44594P02	(Rd) 33KΩ 1/4W	R3019,3020	06S44594P12	(Rd) 82KΩ 1/4W
R804	06S44594P01	(Rd) 30KΩ 1/4W	R3021,3022	06S44594P10	(Rd) 68KΩ 1/4W
R805	06S44594P02	(Rd) 33KΩ 1/4W	R3023,3024	06S44593P89	(Rd) 10KΩ 1/4W
R806	06S44594P01	(Rd) 30KΩ 1/4W	R3025,3026	06S44593P87	(Rd) 8.2KΩ 1/4W
R807	06S44594P02	(Rd) 33KΩ 1/4W	R3027,3028	06S44593P50	(Rd) 240Ω 1/4W
R808	06S44594P01	(Rd) 30KΩ 1/4W	R3029,3030	06S44593P81	(Rd) 4.7KΩ 1/4W
R809,810	06S44594P22	(Rd) 220KΩ 1/4W	R3031,3032	06S44594P08	(Rd) 56KΩ 1/4W
R811,812	06S44593P85	(Rd) 6.8KΩ 1/4W	R3033,3034	06S44593P49	(Rd) 220Ω 1/4W
R813,814	06S44593P51	(Rd) 270Ω 1/4W	R3035,3036	06S44593P84	(Rd) 6.2KΩ 1/4W
R815,816	06S44593P65	(Rd) 1KΩ 1/4W	R3037,3038	06S44594P12	(Rd) 82KΩ 1/4W
R817,818	06S44594P27	(Rd) 360KΩ 1/4W	R3039,3040	06S44593P65	(Rd) 1KΩ 1/4W
R821,822	06S44594P10	(Rd) 68KΩ 1/4W	R3041,3042	06S44593P77	(Rd) 3.3KΩ 1/4W
R823,824	06S44593P89	(Rd) 10KΩ 1/4W	R3043,3044	06S44593P87	(Rd) 8.2KΩ 1/4W
R827,828	06S44594P10	(Rd) 68KΩ 1/4W	R3045,3046	06S40106T14	(Rd) 100KΩ
R835	06S44593P71	(Rd) 1.8KΩ 1/4W	R3047,3048	06S44593P49	(Rd) 220Ω 1/4W
R837,838	06S44594P10	(Rd) 68KΩ 1/4W	R3049,3050	06S44594P14	(Rd) 100KΩ 1/4W
R839,840	06S44593P99	(Rd) 27KΩ 1/4W	R3051,3052	06S44594P14	(Rd) 100KΩ 1/4W
R841,842	06S44593P81	(Rd) 4.7KΩ 1/4W	R3061,3062	06S44593P89	(Rd) 10KΩ 1/4W
R843,844	06S44593P97	(Rd) 22KΩ 1/4W	R3063,3064	06S44593P83	(Rd) 5.6KΩ 1/4W
R2101,2102	06S44594P06	(Rd) 47KΩ 1/4W	R3065,3066	06S44593P41	(Rd) 100Ω 1/4W
R2103,2104	06S44593P01	(Rd) 2.2Ω 1/4W	R3067,3068	06S44593P89	(Rd) 10KΩ 1/4W
R2105,2106	06S44593P59	(Rd) 560Ω 1/4W	R3069,3070	06S44593P68	(Rd) 1.3KΩ 1/4W
R2107,2108	06S40106T32	(Rd) 560KΩ	R3071,3072	06S44594P22	(Rd) 220KΩ 1/4W
R2111,2112	06S40106T18	(Rd) 150KΩ	R3073,3074	06S44594P30	(Rd) 470KΩ 1/4W
R2113,2114	06S44593P44	(Rd) 130Ω 1/4W	R3075,3076	06S44593P74	(Rd) 2.4KΩ 1/4W
R2115,2116	06S44594P11	(Rd) 75KΩ 1/4W	R3077,3078	06S44593P89	(Rd) 10KΩ 1/4W
R2117,2118	06S40106T31	(Rd) 510KΩ	R3079,3080	06S44594P14	(Rd) 100KΩ 1/4W
R2119,2120	06S44593P96	(Rd) 20KΩ 1/4W	R3083,3084	06S44593P89	(Rd) 10KΩ 1/4W
R2121,2122	06S44593P86	(Rd) 7.5KΩ 1/4W	R3085,3086	06S44593P89	(Rd) 10KΩ 1/4W
R2123,2124	06S40106T14	(Rd) 100KΩ	R3087,3088	06S44593P57	(Rd) 470Ω 1/4W
R2125,2126	06S44593P95	(Rd) 18KΩ 1/4W	R3090,3091	06S44594P06	(Rd) 47KΩ 1/4W
R2127,2128	06S44593P91	(Rd) 12KΩ 1/4W	R3092	06S44593P89	(Rd) 10KΩ 1/4W
R2129,2130	06S44593P81	(Rd) 4.7KΩ 1/4W	R3093	06S44594P06	(Rd) 47KΩ 1/4W
R2133,2134	06S44593P65	(Rd) 1KΩ 1/4W	R3094	06S44593P89	(Rd) 10KΩ 1/4W
R2137,2138	06S44593P67	(Rd) 1.2KΩ 1/4W	R3095	06S44593P97	(Rd) 22KΩ 1/4W
R2139,2140	06S44593P81	(Rd) 4.7KΩ 1/4W	R3096	06S44593P89	(Rd) 10KΩ 1/4W
R2141,2142	06S44593P65	(Rd) 1KΩ 1/4W	R3097	06S44593P89	(Rd) 10KΩ 1/4W
R2143,2144	06S44593P69	(Rd) 1.5KΩ 1/4W	R3101,3102	06S40106T08	(Rd) 56KΩ
R2145,2146	06S44594P38	(Rd) 1MΩ 1/4W	R3103,3104	06S44593P93	(Rd) 15KΩ 1/4W
R2149,2150	06S44593P53	(Rd) 330Ω 1/4W	R3105,3106	06S44593P41	(Rd) 100Ω 1/4W
R2160	06S44593P89	(Rd) 10KΩ 1/4W	R3107,3108	06S44593P82	(Rd) 5.1KΩ 1/4W
R2161,2162	06S44593P89	(Rd) 10KΩ 1/4W	R3109,3110	06S44593P47	(Rd) 180Ω 1/4W
R2163	06S44593P77	(Rd) 3.3KΩ 1/4W	R3111,3112	06S44594P06	(Rd) 47KΩ 1/4W
R2164	06S44593P83	(Rd) 5.6KΩ 1/4W	R3113,3114	06S44593P84	(Rd) 6.2KΩ 1/4W
R2167,2168	06S44594P14	(Rd) 100KΩ 1/4W	R3117,3118	06S44594P38	(Rd) 1MΩ 1/4W
R2171	06S44593P81	(Rd) 4.7KΩ 1/4W	R3119,3120	06S44594P12	(Rd) 82KΩ 1/4W
R2173,2174	06S41801P32	(Rd) 1.0KΩ 1/4W	R3121,3122	06S44594P10	(Rd) 68KΩ 1/4W
R2203,2204	06S44594P06	(Rd) 47KΩ 1/4W	R3123,3124	06S44593P89	(Rd) 10KΩ 1/4W
R2501,2502	06S44593P57	(Rd) 470Ω 1/4W	R3125,3126	06S44593P87	(Rd) 8.2KΩ 1/4W
R3001,3002	06S40106T08	(Rd) 56KΩ	R3127,3128	06S44593P50	(Rd) 240Ω 1/4W
R3003,3004	06S44593P93	(Rd) 15KΩ 1/4W	R3129,3130	06S44593P81	(Rd) 4.7KΩ 1/4W
R3005,3006	06S44593P41	(Rd) 100Ω 1/4W	R3131,3132	06S44594P08	(Rd) 56KΩ 1/4W
R3007,3008	06S44593P82	(Rd) 5.1KΩ 1/4W	R3133,3134	06S44593P49	(Rd) 220Ω 1/4W
R3009,3010	06S44593P47	(Rd) 180Ω 1/4W	R3135,3136	06S44593P84	(Rd) 6.2KΩ 1/4W
R3011,3012	06S44594P06	(Rd) 47KΩ 1/4W	R3137,3138	06S44594P12	(Rd) 82KΩ 1/4W
R3013,3014	06S44593P84	(Rd) 6.2KΩ 1/4W	R3139,3140	06S44593P65	(Rd) 1KΩ 1/4W

Symbol No.	Stock No.	Description
R3141,3142	0 6 S 4 4 5 9 3 P 7 7	(Rd) 3.3KΩ 1/4W
R3145,3146	0 6 S 4 0 1 0 6 T 1 4	(Rd) 100KΩ
R3147,3148	0 6 S 4 4 5 9 3 P 8 7	(Rd) 8.2KΩ 1/4W
R3161,3162	0 6 S 4 4 5 9 3 P 8 9	(Rd) 10KΩ 1/4W
R3168	0 6 S 4 0 1 0 6 T 1 4	(Rd) 100KΩ
R3201,3202	0 6 S 4 1 8 0 1 P 4 0	(Rd) 4.7KΩ 1/4W
R3203	0 6 S 4 4 5 9 3 P 6 7	(Rd) 1.2KΩ 1/4W
R3204	0 6 S 4 4 5 9 4 P 2 2	(Rd) 220KΩ 1/4W

### Lamp PCB Parts List

Symbol No.	Stock No.	Description
(Lamp)		
PL1001	6 5 T 5 6 0 3 3 F 0 2	8V/200MA
PL1002	6 5 T 5 6 0 3 3 F 0 2	8V/200MA
PL1003	6 5 T 5 6 0 3 3 F 0 2	8V/200MA
PL1004	6 5 T 5 6 0 3 3 F 0 2	8V/200MA

### Control PCB Parts List

Symbol No.	Stock No.	Description
(IC)		
IC6001	5 1 T 5 1 9 9 4 F 0 1	HD38805A03
IC6002	5 1 T 5 1 7 8 2 F 0 1	MC14028BCP
IC6003	5 1 T 5 2 1 5 8 F 0 1	TD62504
IC6004	5 1 T 5 2 1 5 8 F 0 1	TD62504
IC6005	5 1 T 5 2 1 5 4 F 0 1	NJM2901N
IC6006	5 1 T 5 1 7 8 1 F 0 1	MC14049UB
IC6007	5 1 T 5 2 1 5 8 F 0 1	TD62504
(Filter)		
CF6001	9 1 T 5 2 1 5 6 F 0 1	400P
(Transistor)		
Q6001	4 8 T 5 1 1 1 8 F 0 1	2SA1015-Y
Q6002	4 8 T 5 1 1 1 8 F 0 1	2SA1015-Y
Q6003	4 8 T 5 1 0 8 9 F 0 1	2SA937 Q, R
Q6004	4 8 S 4 3 5 2 5 F 0 5	2SC1815-Y, GR
Q6005	4 8 T 4 2 6 2 0 F 0 3	2SD880-GR
Q6006	4 8 T 5 6 0 3 1 F 0 1	2SD1266-P, Q
Q6007	4 8 T 5 6 0 3 2 F 0 1	2SB977A
Q6008	4 8 T 5 6 0 3 2 F 0 1	2SB977A
Q6009	4 8 T 4 1 3 6 5 F 0 1	2SD893 P
Q6010	4 8 T 4 1 3 6 5 F 0 1	2SD893 P
Q6011	4 8 S 4 3 5 2 5 F 0 5	2SC1815-Y, GR
Q6012	4 8 S 4 3 5 2 5 F 0 5	2SC1815-Y, GR
Q6013	4 8 T 5 6 0 3 2 F 0 1	2SB977A
Q6014	4 8 T 5 6 0 3 2 F 0 1	2SB977A
Q6015	4 8 T 4 1 3 6 5 F 0 1	2SD893 P
Q6016	4 8 T 4 1 3 6 5 F 0 1	2SD893 P
Q6017	4 8 T 5 6 0 3 1 F 0 1	2SD1266-P, Q
Q6018	4 8 T 4 1 3 6 5 F 0 1	2SD893 P
Q6019	4 8 T 4 1 1 9 7 U 0 3	2SA777-R
Q6020	4 8 T 4 1 1 9 7 U 0 3	2SA777-R
Q6021	4 8 T 4 1 1 9 7 U 0 3	2SA777-R
Q6023	4 8 T 4 2 6 2 0 F 0 3	2SD880-GR
(Diode)		
D6004	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6005	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6008	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX

Symbol No.	Stock No.	Description
D6009	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6010	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6011	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6012	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6013	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6014	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6015	4 8 T 5 8 5 8 3 F 0 1	SS176TPA7-AX (UP,AK,AG)
D6016	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6017	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6018	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6019	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6020	4 8 T 4 3 9 8 2 F 0 1	0A95
D6021	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6022	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6023	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6024	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6026	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6027	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6028	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6029	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6030	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6031	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6032	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6033	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6034	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6035	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6036	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6037	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6038	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6039	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6040	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6041	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6042	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6043	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6044	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6048	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6049	4 8 T 4 4 8 1 3 F 0 1	MA165TA -AX
D6050	4 8 S 4 0 4 7 7 U 0 1	1N4003
(Diode,Zener)		
ZD6001	4 8 T 4 0 1 5 0 U 5 4	HZ11A-3
ZD6002	4 8 T 4 0 1 5 0 U 8 6	HZ24-2
ZD6003	4 8 T 4 0 1 5 0 U 6 9	HZ12C-3
ZD6004	4 8 T 4 0 0 5 9 U 1 3	HZ7B-1L (FD)
ZD6004	4 8 T 4 0 0 5 9 U 2 6	HZ9C-2L (FR)
ZD6005	4 8 T 4 0 1 5 0 U 2 2	HZ5B-1 (FD)
ZD6005	4 8 T 4 0 1 5 0 U 2 8	HZ6A-1 (FR)
ZD6006	4 8 T 4 0 0 5 9 U 3 1	HZ11B-1L (FD)
ZD6006	4 8 T 4 0 1 5 0 U 4 9	HZ9B-1 (FR)
ZD6007	4 8 T 4 0 1 5 0 U 0 8	HZ3C-2 (FR)
ZD6007	4 8 T 4 0 1 5 0 U 1 4	HZ4B-2 (FD)
ZD6008	4 8 T 4 0 1 5 0 U 2 5	HZ5C-1
ZD6009	4 8 T 4 0 1 5 0 U 5 6	HZ11B-2
(Capacitor)		
C6001	0 8 T 5 5 2 6 0 F 6 1	(Ce) 10000pF
C6002	0 8 T 5 5 2 6 0 F 6 1	(Ce) 10000pF
C6003	0 8 T 5 5 2 6 0 F 6 1	(Ce) 10000pF
C6004	0 8 T 5 5 2 6 0 F 6 1	(Ce) 10000pF
C6005	0 8 T 5 5 2 6 0 F 6 1	(Ce) 10000pF

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description	
C6006	08T55260F61	(Ce) 10000pF	R6031	06S55066F06	(Rd) 47KΩ 1/6W	
C6007	08T55260F61	(Ce) 10000pF	R6032	06S55066F06	(Rd) 47KΩ 1/6W	
C6008	08T55260F45	(Ce) 470pF	R6033	06S55066F06	(Rd) 47KΩ 1/6W	
C6009	08T55260F38	(Ce) 120pF	R6034	06S55066F06	(Rd) 47KΩ 1/6W	
C6010	23S40657F10	(El) 10uF 16V	R6035	06S55066F06	(Rd) 47KΩ 1/6W	
C6011	08T55260F58	(Ce) 4700pF	R6036	06S55065F89	(Rd) 10KΩ 1/6W	
C6012	08T55260F58	(Ce) 4700pF	R6037	06S55066F06	(Rd) 47KΩ 1/6W	
C6013	08T55260F58	(Ce) 4700pF	R6038	06S55065F89	(Rd) 10KΩ 1/6W	
C6014	23S40657F17	(El) 10uF 25V	R6039	06S55066F06	(Rd) 47KΩ 1/6W	
C6015	23S40657F17	(El) 10uF 25V	R6040	06S55066F14	(Rd) 100KΩ 1/6W	
C6016	23S40657F10	(El) 10uF 16V	R6041	06S55066F14	(Rd) 100KΩ 1/6W	
C6017	23S40657F10	(El) 10uF 16V	R6042	06S55065F89	(Rd) 10KΩ 1/6W	
C6018	23S40657F10	(El) 10uF 16V	R6043	06S55066F06	(Rd) 47KΩ 1/6W	
C6019	23S40657F10	(El) 10uF 16V	R6044	06S55065F89	(Rd) 10KΩ 1/6W	
C6020	23S40657F10	(El) 10uF 16V	R6045	06S55065F89	(Rd) 10KΩ 1/6W	
C6021	23S40657F10	(El) 10uF 16V	R6046	06S55066F06	(Rd) 47KΩ 1/6W	
C6022	23S40657F14	(El) 100uF 16V	R6047	06S55065F65	(Rd) 1KΩ 1/6W	
C6023	23S40657F10	(El) 10uF 16V	R6048	06S55065F65	(Rd) 1KΩ 1/6W	
C6024	08T55260F61	(Ce) 10000pF	R6049	06S55065F65	(Rd) 1KΩ 1/6W	
C6025	23S40657F10	(El) 10uF 16V	R6050	06S55065F73	(Rd) 2.2KΩ 1/6W	
C6026	08T57851F19	(Tf) 0.33uF	R6051	06S55065F89	(Rd) 10KΩ 1/6W	
C6027	08T57851F19	(Tf) 0.33uF	R6052	06S55065F89	(Rd) 10KΩ 1/6W	
C6028	23S41059P19	(Ta) 4.7uF 25V	R6053	06S55066F06	(Rd) 47KΩ 1/6W	
C6029	23S40657F15	(El) 3.3uF 25V	R6054	06D44744G32	(Rd) 1KΩ 1/2W	
C6030	23T40475U27	(El) 47uF 25V	R6055	06S55065F89	(Rd) 10KΩ 1/6W	
C6031	23S40657F17	(El) 10uF 25V	R6056	06S55065F89	(Rd) 10KΩ 1/6W	
C6032	23S40657F07	(El) 47uF 10V	R6057	06S55065F89	(Rd) 10KΩ 1/6W	
C6033	23S40657F10	(El) 10uF 16V	R6058	06S55065F89	(Rd) 10KΩ 1/6W	
C6034	23S40657F09	(El) 220uF 10V	R6059	06S55065F89	(Rd) 10KΩ 1/6W	
C6035	08T55260F45	(Ce) 470pF	R6060	06S55065F73	(Rd) 2.2KΩ 1/6W	
C6036	23S40657F10	(El) 10uF 16V	R6061	06S55065F89	(Rd) 10KΩ 1/6W	
C6037	23S40657F10	(El) 10uF 16V	R6062	06S55065F73	(Rd) 2.2KΩ 1/6W	
C6038	23S41059P34	(Ta) 47uF 6.3V	R6063	06S55065F73	(Rd) 2.2KΩ 1/6W	
C6039	23T42477F09	(El) 4.7uF 25V	R6064	06S55065F73	(Rd) 2.2KΩ 1/6W	
(Resistor)			R6065	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6001	51T52333F01	(Allay) 47KX8	R6066	06S55065F89	(Rd) 10KΩ 1/6W	
R6002	51T52333F02	(Allay) 10KX4	(FR)	R6067	06D44744G32	(Rd) 1KΩ 1/2W
R6002	51T52333F07	(Allay) 100KX4	(FD)	R6068	06S55065F89	(Rd) 10KΩ 1/6W
R6003	06S55065F65	(Rd) 1KΩ 1/6W	R6069	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6004	06S55065F65	(Rd) 1KΩ 1/6W	R6070	06S55065F89	(Rd) 10KΩ 1/6W	
R6005	06S55065F65	(Rd) 1KΩ 1/6W	R6071	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6006	06S55065F65	(Rd) 1KΩ 1/6W	R6072	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6007	06S55065F65	(Rd) 1KΩ 1/6W	R6073	06S55065F89	(Rd) 10KΩ 1/6W	
R6008	06S55065F65	(Rd) 1KΩ 1/6W	R6074	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6009	06S55065F65	(Rd) 1KΩ 1/6W	R6075	06S55065F89	(Rd) 10KΩ 1/6W	
R6010	06S55066F38	(Rd) 1MΩ 1/6W	R6076	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6011	06S55065F57	(Rd) 470Ω 1/6W	R6077	06S55065F89	(Rd) 10KΩ 1/6W	
R6012	06S55065F57	(Rd) 470Ω 1/6W	R6078	06S55065F85	(Rd) 6.8KΩ 1/6W	
R6015	06S55065F59	(Rd) 560Ω 1/6W	R6079	06S55066F02	(Rd) 33KΩ 1/6W	
R6017	06S55065F57	(Rd) 470Ω 1/6W	R6080	06S55066F14	(Rd) 100KΩ 1/6W	
R6018	06T51015F19	(Rd) 82Ω 1/2W	R6081	06S55065F89	(Rd) 10KΩ 1/6W	
R6024	06S55065F89	(Rd) 10KΩ 1/6W	R6082	06S55066F14	(Rd) 100KΩ 1/6W	
R6025	06S55065F89	(Rd) 10KΩ 1/6W	R6083	06S55065F73	(Rd) 2.2KΩ 1/6W	
R6026	06S55065F65	(Rd) 1KΩ 1/6W	R6084	06S55066F22	(Rd) 220KΩ 1/6W	
R6027	06S55066F06	(Rd) 47KΩ 1/6W	R6086	06S55065F89	(Rd) 10KΩ 1/6W	
R6028	06S55065F89	(Rd) 10KΩ 1/6W	R6087	06S55065F65	(Rd) 1KΩ 1/6W	
R6029	06S55065F89	(Rd) 10KΩ 1/6W	R6088	06S55065F89	(Rd) 10KΩ 1/6W	
R6030	06S55066F06	(Rd) 47KΩ 1/6W	R6089	06S55066F38	(Rd) 1MΩ 1/6W	

Symbol No.	Stock No.	Description
R6090	06S55066F14	(Rd) 100KΩ 1/6W
R6091	06S55065F97	(Rd) 22KΩ 1/6W
R6092	06S55065F89	(Rd) 10KΩ 1/6W
R6093	06S55065F89	(Rd) 10KΩ 1/6W
R6094	06S55065F89	(Rd) 10KΩ 1/6W
R6095	06S55065F89	(Rd) 10KΩ 1/6W
R6096	06S55065F89	(Rd) 10KΩ 1/6W
R6097	06S55065F89	(Rd) 10KΩ 1/6W
R6098	06S55065F89	(Rd) 10KΩ 1/6W
R6099	06S55065F89	(Rd) 10KΩ 1/6W
R6100	06S55065F89	(Rd) 10KΩ 1/6W
R6104	06S55065F73	(Rd) 2.2KΩ 1/6W

### SW & VR PCB

Symbol No.	Stock No.	Description
(Switch)		
S4901	40T52408F01	SUT110 [Peak TV]
S6901	40T52408F01	SUT110 [A.Play]
S6902	40T52408F01	SUT110 [A.Rew]
S6903	40T51411F02	(BLK)-4 [W/CTR]
S6904	40T51411F02	(BLK)-4 [CLR]
S6905	40T51411F02	(BLK)-4 [EXC]
S6906	40T51411F02	(BLK)-4 [CALL]
S6907	40T51411F02	(BLK)-4 [WRT]
S6908	40T52408F01	SUT110 [MPX]
S6909	40T52408F01	SUT110 [Monitor]
(Variable Resistor)		
VR2903,2904	18T60112F02	Slide 3013G 50K-B [Rec]
VR2905	18T58774F02	Slide 6023G 50K-BX2 [M]
VR4901	18T60490F01	Slide 10KB [Output]
(Diode & LED)		
D6901	48T51582F01	MA-150 -AX
LD6901	48T58301F01	GRN TLUG 153
LD6902	48T58301F01	GRN TLUG 153
LD6903	48T61075F01	YEL TLO 153
(Resistor)		
R2501,2502	06S44593P98	(Rd) 24KΩ 1/4W
R6901,6902	06S44593P57	(Rd) 470Ω 1/4W
R6903	06S44593P89	(Rd) 10KΩ 1/4W
R6904	06S44593P57	(Rd) 470Ω 1/4W
R6905	06S44593P49	(Rd) 220Ω 1/4W

### LED PCB Parts List

Symbol No.	Stock No.	Description
(LED)		
LD3701,3702	48T52609F01	ORANGE TLO 163 [Source]
LD6701,6702	48T52609F01	ORANGE TLO 163 [Tape]
LD6703,6704	48T52609F01	ORANGE TLO 163

### Line Sensor PCB Parts List

Symbol No.	Stock No.	Description
(Resistor)		
R1901	06S44594P38	(Rd) 1MΩ 1/4W

### Auto Erase PCB Parts List

Symbol No.	Stock No.	Description
(Relay)		
RY9001	80T52119F01	BR221D012
(Variable Resistor)		
VR9001,9002	18T43733P15	10K-1/2W
(IC)		
IC9001	51S43471U02	UPC4558C
IC9002	51T51173F01	UPC4556C
(Transistor & FET)		
Q9001	48T58777F02	2SJ44 - M
Q9002	48S43525F03	2SC1815-GR
Q9003	48S43525F03	2SC1815-GR
Q9004	48S43525F03	2SC1815-GR
Q9005	48S43525F03	2SC1815-GR
(Diode)		
D9001,9002	48T51582F01	MA-150 -AX
D9003,9004	48T51582F01	MA-150 -AX
D9005,9006	48T51582F01	MA-150 -AX
D9007	48T51582F01	MA-150 -AX
D9008	48T55186F01	GP10D -AX
(Diode,Zenner)		
ZD9001	48T52739F19	HZ 4B-1 -AX
(Capacitor)		
C9001,9002	08T52448F31	(Pp) 5600pF
C9003	08S44505P13	(Ce) 10pF
C9004	23T58711F31	(El) 2.2uF 50V
C9005	23T58711F31	(El) 2.2uF 50V
C9006	23T42477F06	(El) 10uF 16V
C9007	23T58711F11	(El) 10uF 16V
C9008	23S40657F52	(El) 220uF 16V
C9009	23S40657F10	(El) 10uF 16V
C9010	23S40657F11	(El) 22uF 16V
C9011,9012	23S40657F10	(El) 10uF 16V
C9013,9014	23S40657F10	(El) 10uF 16V
C9015	23S40657F08	(El) 100uF 10V
C9016	23S40657F06	(El) 33uF 10V
(Resistor)		
R9001	06S44594P02	(Rd) 33KΩ 1/4W
R9002	06S44593P99	(Rd) 27KΩ 1/4W
R9003	06S44594P05	(Rd) 43KΩ 1/4W
R9004	06S44594P14	(Rd) 100KΩ 1/4W
R9005	06S44593P97	(Rd) 22KΩ 1/4W
R9006	06S44593P81	(Rd) 4.7KΩ 1/4W
R9007	06S44593P89	(Rd) 10KΩ 1/4W
R9008	06S44594P30	(Rd) 470KΩ 1/4W
R9009	06S44594P08	(Rd) 56KΩ 1/4W
R9010	06S44593P67	(Rd) 1.2KΩ 1/4W
R9011	06S44594P20	(Rd) 180KΩ 1/4W
R9012	06S44593P97	(Rd) 22KΩ 1/4W
R9013	06S44593P89	(Rd) 10KΩ 1/4W
R9014	06S44593P81	(Rd) 4.7KΩ 1/4W
R9015	06S44593P65	(Rd) 1KΩ 1/4W
R9016	06S44594P26	(Rd) 330KΩ 1/4W
R9017,9018	06S44593P57	(Rd) 470Ω 1/4W
R9019	06S44593P81	(Rd) 4.7KΩ 1/4W
R9020	06S44594P11	(Rd) 75KΩ 1/4W
R9021	06S44594P16	(Rd) 120KΩ 1/4W

Symbol No.	Stock No.	Description
R9022	06S44593P87	(Rd) 8.2KΩ 1/4W
R9023	06S44594P14	(Rd) 100KΩ 1/4W
R9024	06S44593P89	(Rd) 10KΩ 1/4W
R9025	06S44593P81	(Rd) 4.7KΩ 1/4W
R9026	06S44593P89	(Rd) 10KΩ 1/4W
R9027	06S44593P75	(Rd) 2.7KΩ 1/4W
R9028	06S44593P41	(Rd) 100Ω 1/4W

Symbol No.	Stock No.	Description
C4557,4558	23S40657F11	(El) 22uF 16V
C4559,4560	23C44780P08	(El) 220uF 16V
C4561,4562	23S40657F04	(El) 220uF 6.3V
C4563	08T55260F61	(Ce) 10000pF
C4564	23S40657F21	(El) 100uF 25V
C4565	23S40657F28	(El) 1.0uF 50V
C4566	23S40657F10	(El) 10uF 16V
C4567	23T42477F10	(El) 6.8uF 25V
C4569,4570	23S40657F28	(El) 1.0uF 50V

## Output SW PCB Parts List

Symbol No.	Stock No.	Description
(Relay)		
RY7001	80T52119F01	BR221D012 [Test OSC]
(Switch)		
S7001	40T60658F01	SSR
(Transistor)		
Q7001	48S43525F03	2SC1815-GR
(Diode)		
D7001	48T55186F01	GP10D -AX
(Capacitor)		
C7001	08S44505P49	(Ce) 1000pF
(Resistor)		
R7001	06S44593P91	(Rd) 12KΩ 1/4W
R7002	06S44593P81	(Rd) 4.7KΩ 1/4W

## Head Phone & Meter PCB Parts List

Symbol No.	Stock No.	Description
(Variable Resistor)		
VR4551,4552	18T43733P10	1.0K-1/2W
VR4553,4554	18T43733P13	3.3K-1/2W
VR4555,4556	18T43733P01	4.7K-1/2
(IC)		
IC4501,4502	51T57856F01	POWER NJM386S
IC4551	51T47740F01	TA7332P
IC4552	51S43471U02	UPC4558C
IC4553	51T40941U01	MC14066 BCP
(Transistor)		
Q4501,4502	48T51878F01	2SC2878 A, B
Q4553,4554	48T51878F01	2SC2878 A, B
Q4555,4556	48T51878F01	2SC2878 A, B
Q4557,4558	48S43525F05	2SC1815-Y, GR
(Diode)		

D4551,4552	48T43982F01	0A95
D4553,4554	48T43982F01	0A95
D4557,4558	48T44813F01	MA165TA -AX
D4559	48T44813F01	MA165TA -AX

### (Diode,Zener)

ZD4551	48T40150U65	HZ12B-2
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### (Posistor)

PS4551,4552	48T56034F01	471
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### (Capacitor)

C4501,4502	23T43197F06	(El) 10uF 16V
C4505,4506	23T43197F11	(El) 220uF 16V
C4507	23T43197F11	(El) 220uF 16V
C4551,4552	23S40657F17	(El) 10uF 25V
C4553,4554	23S41059P09	(Ta) 1.5uF 25V
C4555,4556	23S41059P22	(Ta) 6.8uF 16V

Symbol No.	Stock No.	Description
(Resistor)		
R4501,4502	06S55066F13	(Rd) 91KΩ 1/6W
R4503,4504	06S55065F97	(Rd) 22KΩ 1/6W
R4505,4506	06S55065F89	(Rd) 10KΩ 1/6W
R4507,4508	06S55065F30	(Rd) 36Ω 1/6W
R4509,4510	06S55065F30	(Rd) 36Ω 1/6W
R4511,4512	06S55065F30	(Rd) 36Ω 1/6W
R4514	06S55065F65	(Rd) 1KΩ 1/6W
R4551,4552	06S55065F17	(Rd) 10Ω 1/6W
R4553,4554	06S55065F83	(Rd) 5.6KΩ 1/6W
R4555,4556	06S55066F18	(Rd) 150KΩ 1/6W
R4557,4558	06S55066F38	(Rd) 1MΩ 1/6W
R4559,4560	06S55066F38	(Rd) 1MΩ 1/6W
R4561,4562	06S55065F97	(Rd) 22KΩ 1/6W
R4563,4564	06S55065F79	(Rd) 3.9KΩ 1/6W
R4565,4566	06S55065F61	(Rd) 680Ω 1/6W
R4567,4568	06S55065F65	(Rd) 1KΩ 1/6W
R4569,4570	06S55065F53	(Rd) 330Ω 1/6W
R4573,4574	06S55065F49	(Rd) 220Ω 1/6W
R4575,4576	06S55065F49	(Rd) 220Ω 1/6W
R4578	06S55065F97	(Rd) 22KΩ 1/6W
R4579	06S55065F97	(Rd) 22KΩ 1/6W
R4580	06S55065F81	(Rd) 4.7KΩ 1/6W
R4581,4582	06S55065F97	(Rd) 22KΩ 1/6W
R4583	06S55065F65	(Rd) 1KΩ 1/6W
R4584	06S55065F89	(Rd) 10KΩ 1/6W
R4585	06S55065F97	(Rd) 22KΩ 1/6W
R4586	06S55066F22	(Rd) 220KΩ 1/6W
R4587	06S55065F89	(Rd) 10KΩ 1/6W
R4589,4590	06S55066F22	(Rd) 220KΩ 1/6W
R4591,4592	06S55066F22	(Rd) 220KΩ 1/6W
R4593,4594	06S55065F89	(Rd) 10KΩ 1/6W

## Pitch Control PCB Parts List

Symbol No.	Stock No.	Description
(Variable Resistor)		
VR6501	18T52411F02	K161 20KB
(IC)		
IC6501	51S43471U02	UPC4558C
(Transistor & FET)		
Q6301	48T51878F01	2SC2878 A, B
Q6501	48T52122F01	2SK301R
Q6502	48T52122F01	2SK301R
(Diode)		
D6301	48T51582F01	MA-150 -AX
D6302	48T51582F01	MA-150 -AX
D6501	48T51582F01	MA-150 -AX
D6502	48T51582F01	MA-150 -AX

Symbol No.	Stock No.	Description
(Capacitor)		
C6301	23S40657F51	(El) 330uF 10V
C6501	23S40657F13	(El) 47uF 16V
C6502	23S40657F13	(El) 47uF 16V
(Resistor)		
R6301	06S44594P14	(Rd) 100KΩ 1/4W
R6302	06S44593P89	(Rd) 10KΩ 1/4W
R6303	06S44593P89	(Rd) 10KΩ 1/4W
R6304	06S44593P73	(Rd) 2.2KΩ 1/4W
R6501	06S44593P89	(Rd) 10KΩ 1/4W
R6502	06S44593P73	(Rd) 2.2KΩ 1/4W
R6503	06S44593P89	(Rd) 10KΩ 1/4W
R6504	06S44594P14	(Rd) 100KΩ 1/4W
R6505	06S44594P12	(Rd) 82KΩ 1/4W

## REC EQ PCB Parts List

Symbol No.	Stock No.	Description
(Variable Resistor)		
VR5501,5502	18T45040F14	0.3W-15K
VR5503,5504	18T45040F14	0.3W-15K
VR5507,5508	18T45040F14	0.3W-15K
VR5509,5510	18T45040F11	0.3W-4.7K
VR5511,5512	18T45040F11	0.3W-4.7K
VR5515,5516	18T45040F11	0.3W-4.7K
VR5517,5518	18T45040F14	0.3W-15K
VR5519,5520	18T45040F14	0.3W-15K
VR5523,5524	18T45040F14	0.3W-15K
(IC)		
IC5501,5502	51T52118F01	UPC4559C

## Key Board SW PCB Parts List

Symbol No.	Stock No.	Description
(Switch)		
S6801	40T58028F02	(GRAY)-4 [Stop]
S6802	40T58028F02	(GRAY)-4 [FF]
S6803	40T58028F02	(GRAY)-4 [Rew]
S6804	40T58028F02	(GRAY)-4 [Play]
S6805	40T58028F02	(GRAY)-4 [Pause]
S6806	40T58028F02	(GRAY)-4 [Rec]
S6807	40T58028F02	(GRAY)-4 [Rec-M]
(LED)		
LD6901	48T51833F03	GRN BG 4524K [Pause]
LD6902	48T51833F03	GRN BG 4524K [Play]
LD6905	48T51833F02	RED PR 4524K [Rec]

## Timer SW PCB Parts List

Symbol No.	Stock No.	Description
(Switch)		
SW6801	40T55489F01	SSA

## Pulse OSC PCB Parts List

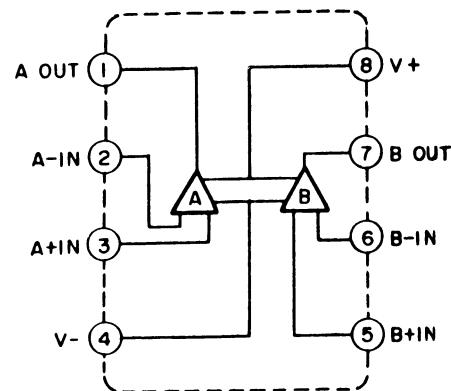
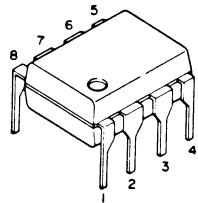
Symbol No.	Stock No.	Description
(IC)		
IC6351	51T51781F01	MC14049UB
(Diode)		
D6351	48T43189F01	1S1555
D6352	48T43189F01	1S1555
D6353	48T43189F01	1S1555
(Capacitor)		
C6351	23T42477F16	(El) 1.0uF 50V
C6352	23S40657F10	(El) 10uF 16V
C6353	08S40656F21	(My) 47000pF
C6354	23S40657F10	(El) 10uF 26V
(Resistor)		
R6351	06S44594P14	(Rd) 100KΩ 1/4W
R6352	06S44594P20	(Rd) 180KΩ 1/4W
R6353	06S44594P38	(Rd) 1MΩ 1/4W
R6354	06S44594P14	(Rd) 100KΩ 1/4W
R6355	06S44594P14	(Rd) 100KΩ 1/4W

Symbol No.	Stock No.	Description
(Transistor & FET)		
Q5501,5502	48S47729F02	2SK117 BL
Q5503,5504	48S47729F02	2SK117 BL
Q5507,5508	48S47729F02	2SK117 BL
Q5509,5510	48S47729F02	2SK117 BL
Q5511,5512	48S47729F02	2SK117 BL
Q5515,5516	48S47729F02	2SK117 BL
Q5517,5518	48T51878F01	2SC2878 A, B
Q5519,5520	48T51878F01	2SC2878 A, B
(Diode)		
D5501,5502	48T51582F01	MA-150 -AX
D5503,5504	48T51582F01	MA-150 -AX
D5507,5508	48T51582F01	MA-150 -AX
D5509,5510	48T51582F01	MA-150 -AX
D5511,5512	48T51582F01	MA-150 -AX
D5515,5516	48T51582F01	MA-150 -AX
D5517,5518	48S134816	1S1555
D5519,5520	48S134816	1S1555
(Capacitor)		
C5501,5502	23T43197F24	(El) 22uF 25V
C5503,5504	08S44505P35	(Ce) 82pF
C5505,5506	08T52448F01	(Pp) 0.00033uF
C5507,5508	08T52448F49	(Pp) 33000pF
C5509,5510	08T50579F25	(Tf) 1.0uF
C5511,5512	08T52448F45	(Pp) 22000pF
C5513,5514	23S40657F17	(El) 10uF 25V
C5515,5516	23T43197F02	(El) 1uF 50V
C5517,5518	08S44505P17	(Ce) 15pF
C5519,5520	08T52448F41	(Pp) 15000pF
C5521,5522	08T52448F40	(Pp) 13000pF
C5525,5526	08T52448F15	(Pp) 1200pF
C5529,5530	23S40657F52	(El) 220uF 16V
C5531,5532	23S40657F17	(El) 10uF 25V
C5535,5536	08S44505P17	(Ce) 15pF
C5537,5538	08T52448F13	(Pp) 1000pF
C5539,5540	08T52448F13	(Pp) 1000pF
C5543,5544	08T52448F11	(Pp) 0.00082uF
C5545,5546	23T43197F11	(El) 220uF 16V
C5547,5548	23S40657F52	(El) 220uF 16V
C5549,5550	23T43197F13	(El) 100uF 25V
C5551,5552	08S44505P61	(Ce) 10000pF
C5554	08S44505P61	(Ce) 10000pF
(Resistor)		
R5501,5502	06S44593P95	(Rd) 18KΩ 1/4W

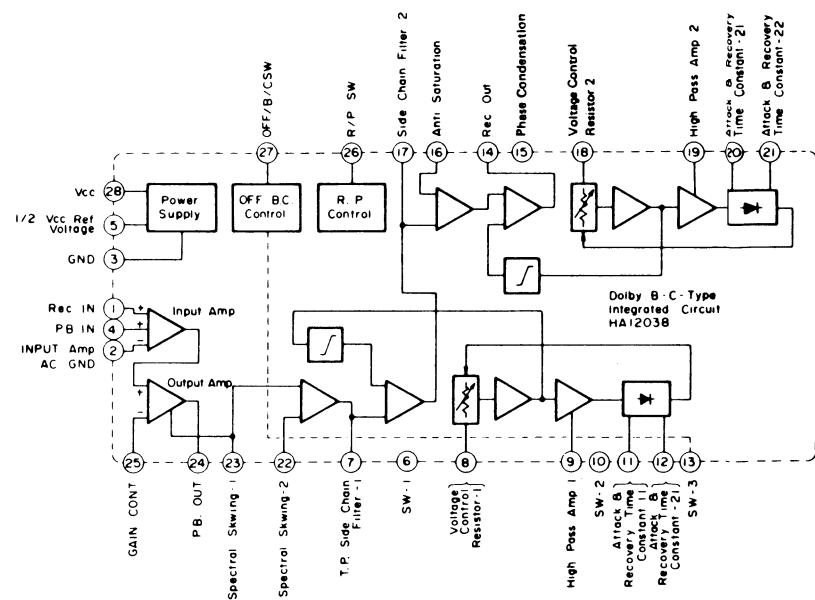
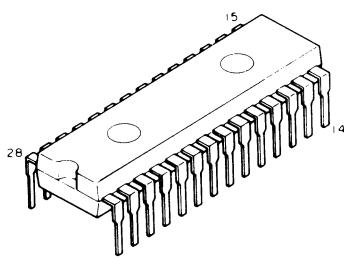
Symbol No.	Stock No.	Description
R5504	06S44593P95	(Rd) 18KΩ 1/4W
R5505,5506	06S44594P10	(Rd) 68KΩ 1/4W
R5507,5508	06S44593P99	(Rd) 27KΩ 1/4W
R5509,5510	06S44593P85	(Rd) 6.8KΩ 1/4W
R5511,5512	06S44594P02	(Rd) 33KΩ 1/4W
R5513,5514	06S44593P53	(Rd) 330Ω 1/4W
R5515,5516	06S44594P16	(Rd) 120KΩ 1/4W
R5517,5518	06S40106T22	(Rd) 220KΩ
R5519,5520	06S40106T22	(Rd) 220KΩ
R5521,5522	06S44593P65	(Rd) 1KΩ 1/4W
R5523,5524	06S44593P65	(Rd) 1KΩ 1/4W
R5527,5528	06S44593P65	(Rd) 1KΩ 1/4W
R5529,5530	06S44593P77	(Rd) 3.3KΩ 1/4W
R5531,5532	06S44593P77	(Rd) 3.3KΩ 1/4W
R5535,5536	06S44593P77	(Rd) 3.3KΩ 1/4W
R5537,5538	06S44593P65	(Rd) 1KΩ 1/4W
R5539,5540	06S44593P65	(Rd) 1KΩ 1/4W
R5543,5544	06S44593P73	(Rd) 2.2KΩ 1/4W
R5545,5546	06S44593P89	(Rd) 10KΩ 1/4W
R5547,5548	06S44593P85	(Rd) 6.8KΩ 1/4W
R5551,5552	06S44593P89	(Rd) 10KΩ 1/4W
R5555,5556	06S44593P53	(Rd) 330Ω 1/4W
R5557,5558	06S44594P16	(Rd) 120KΩ 1/4W
R5563,5564	06S44593P97	(Rd) 22KΩ 1/4W
R5565,5566	06S44593P97	(Rd) 22KΩ 1/4W
R5569,5570	06S44593P97	(Rd) 22KΩ 1/4W
R5571,5572	06S44593P53	(Rd) 330Ω 1/4W
R5573,5574	06S44593P53	(Rd) 330Ω 1/4W
R5577,5578	06S44593P53	(Rd) 330Ω 1/4W
R5579,5580	06S44593P49	(Rd) 220Ω 1/4W
R5581,5582	06S44593P63	(Rd) 820Ω 1/4W
R5585,5586	06S41801P52	(Rd) 47KΩ 1/4W
R5587,5588	06S41801P52	(Rd) 47KΩ 1/4W
R5589	06S40106T22	(Rd) 220KΩ
R5591,5592	06S44594P26	(Rd) 330KΩ 1/4W

# IC Handling Guide

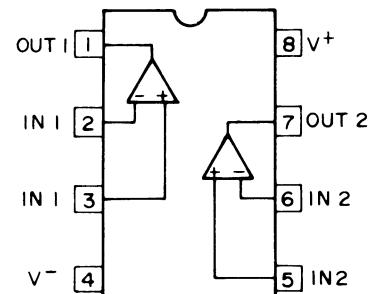
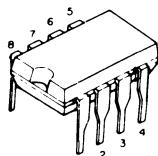
NJM2043D-D  
NJM2041D-D



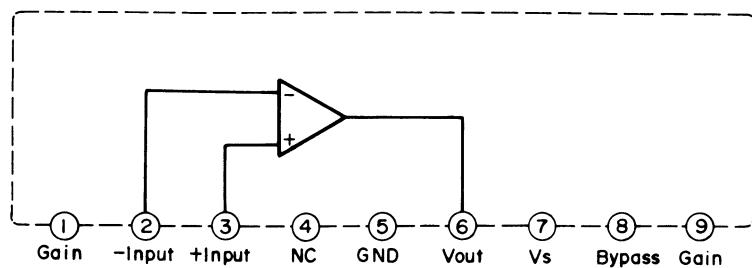
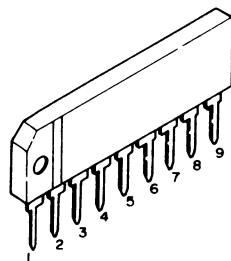
HA12038-01



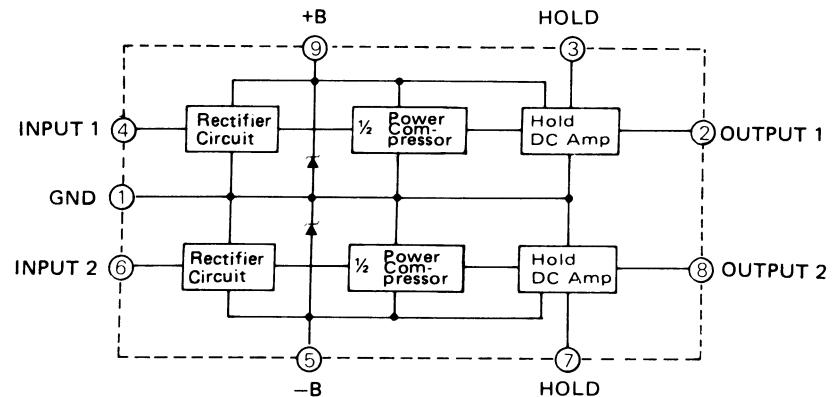
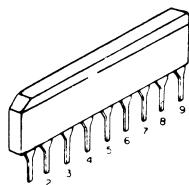
$\mu$ PC4558C  
 $\mu$ PC4556C



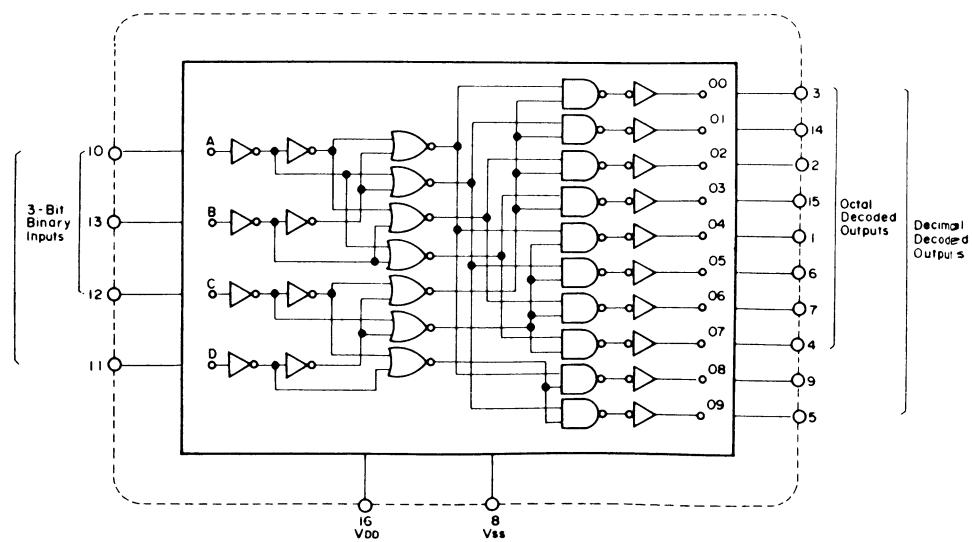
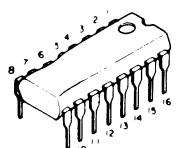
### NJM386S



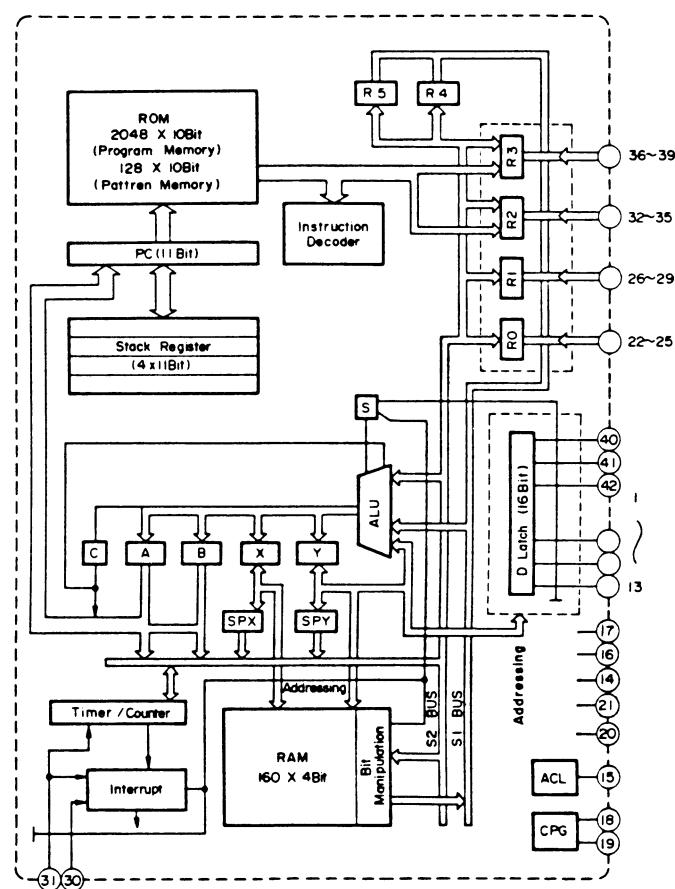
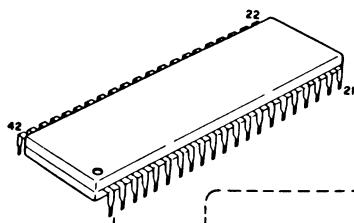
### TA7332P



### MC14028BCP

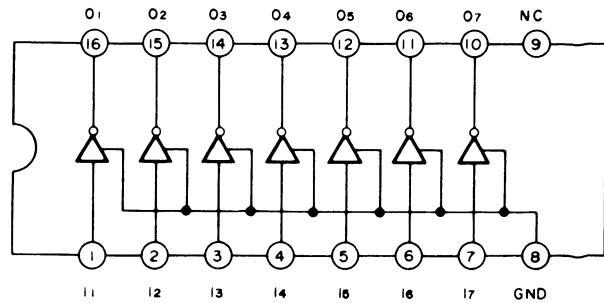
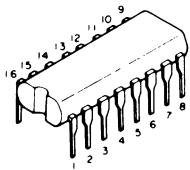


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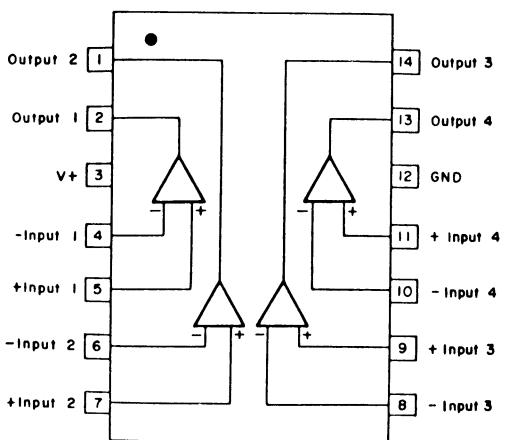
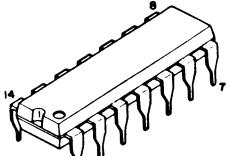


Pin No.	Code	Description
1	AMR	ASSIST MOTOR REVERSE
2	RMF	REEL MOTOR FORWARD
3	RMR	REEL MOTOR REVERSE
4	RMV	REEL MOTOR VOLTAGE
5	EBRK	ELECTROMAGNETIC BRAKE
6	PAMO	PLAY AMP MUTE OUT
7	RAMO	RECORD AMP MUTE OUT
8	RAMLO	RECORD AMP MUTE LED OUT
9	ATSO	AUTO TEST STOP OUT
10	EXCLO	EXECUTION LED OUT
11	WCTRO	WATCH COUNTER OUT
12	RECO	REC OUT
13	PALS	PULSE IN
14	VDISP	GND
15	RESET	
16	VBB	GND
17	VDD	
18	OSC1	
19	OSC2	
20	TEST	
21	Vss	
22	STOP I	
23	FF I	
24	RWD I	
25	PLY I	
26	PAUSE I	
27	REC I	REC IN
28	REC M I	REC MUTE IN
29	ATMD I	AUTO TEST MODE IN (REC EQ TEST IN)
30	POWER	POWER ON/OFF IN
31	EXCPL	EXECUTION PULSE IN
32	KEY R0	
33	KEY R1	
34	KEY R2	
35	KEY R3	
36	PAUSE O	PAUSE OUT
37	PLAY O	PLAY OUT
38	FF O	FF OUT
39	RWD O	REW OUT
40	MX0	MATRIX STROBE LINE 0
41	MX1	MATRIX STROBE LINE 1
42	AMF	ASSIST MOTOR FORWARD

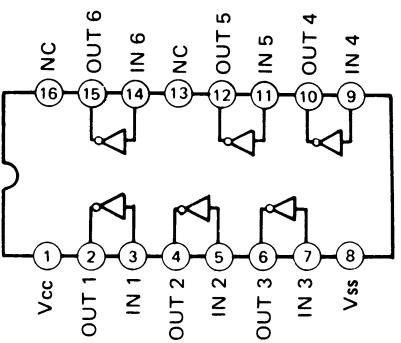
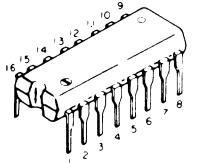
### TD62504



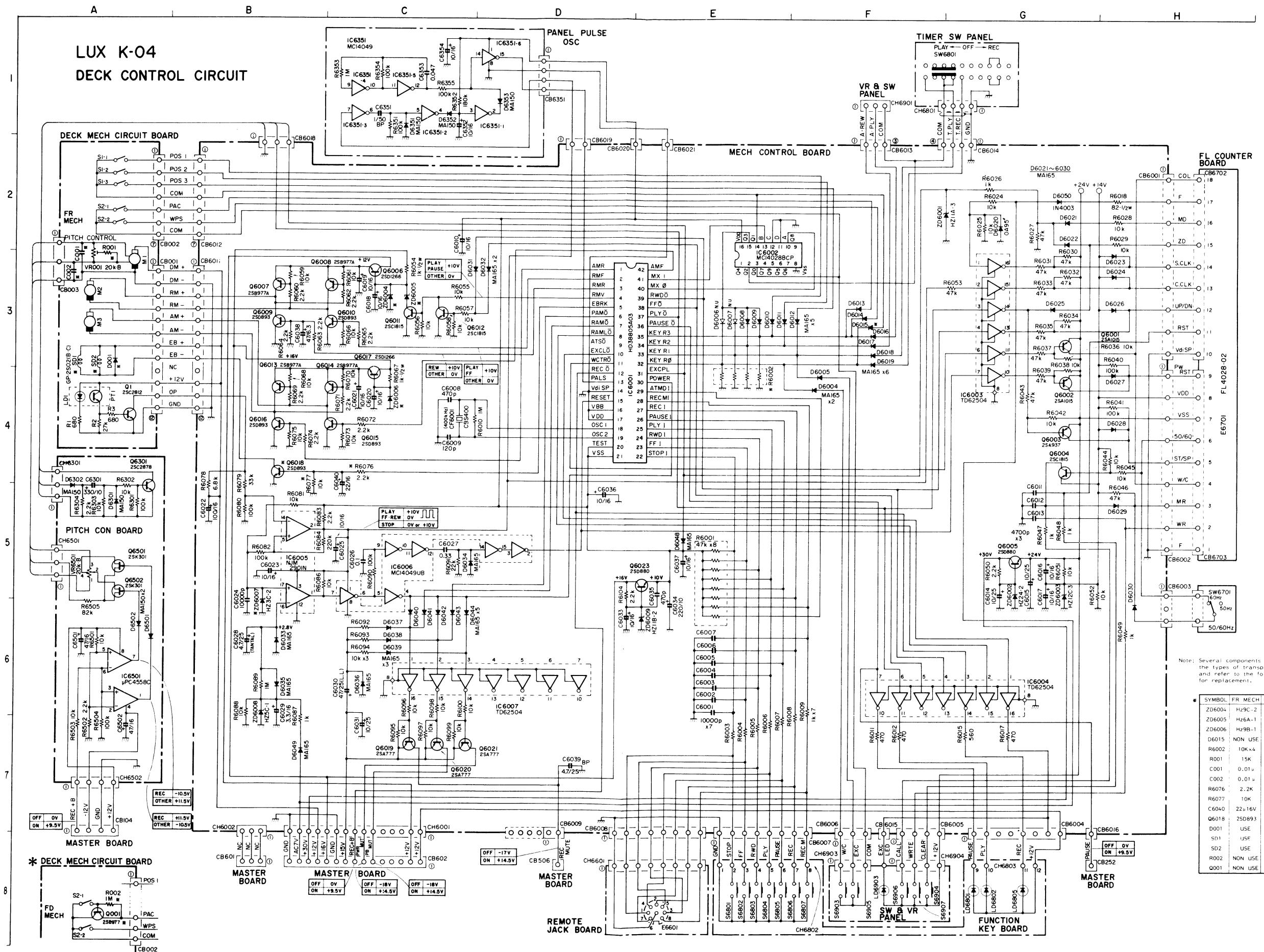
**NJM2901N**



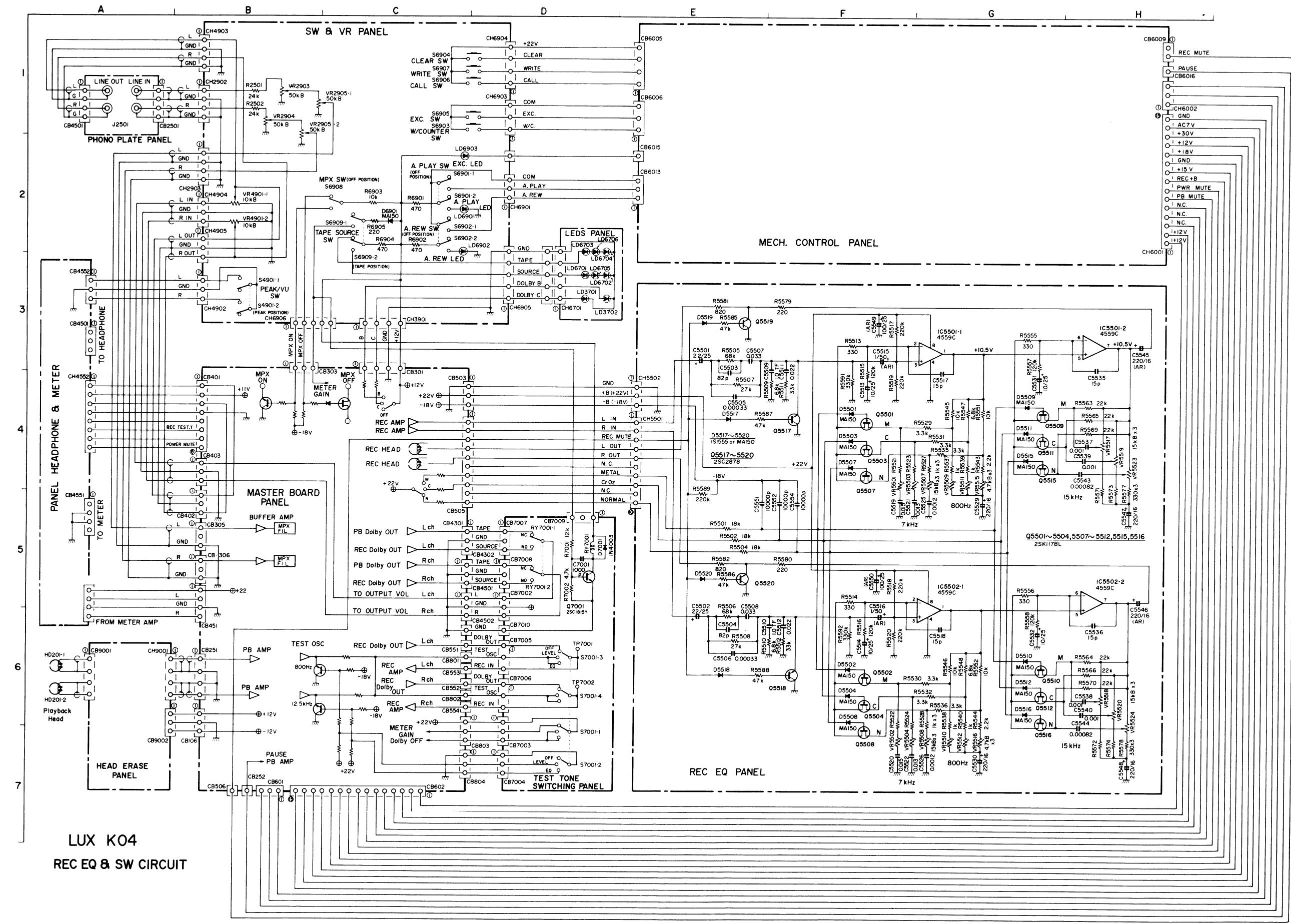
**MC14049UB**



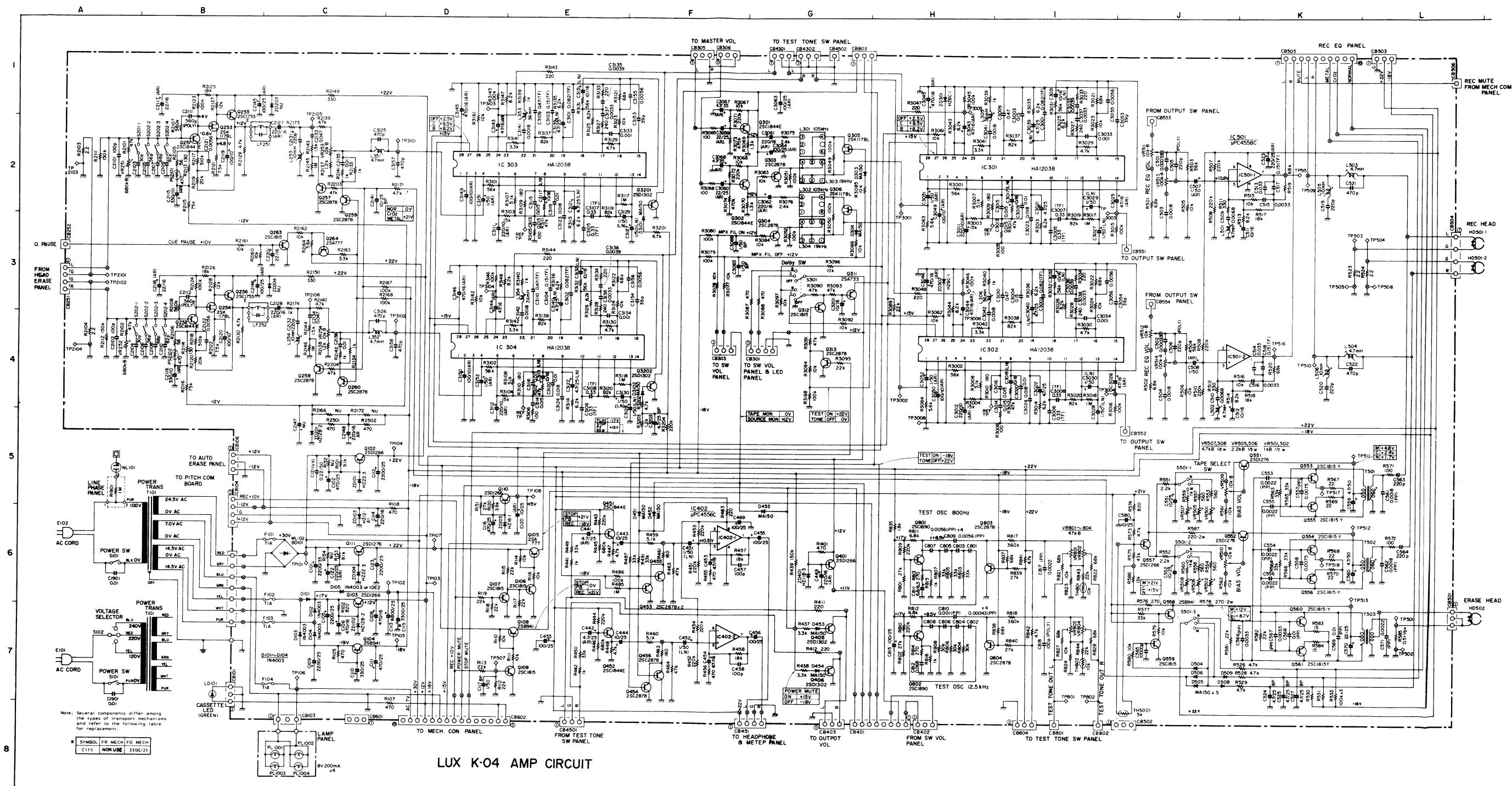
# Schematic Diagram(1)



## Schematic Diagram(2)



## Schematic Diagram(3)





## 規 格

ト ラ ッ ク 形 式	4 ト ラ ッ ク・ 2 チ ャ ナ ル・ ス テ レ オ 方 式
ヘ ッ ド 構 成	録 再 ; センダスト / フ ェ ラ イ ツ コンビ 録 再 ヘ ッ ド 消 去 ; デュアル・ギップ・センダスト / フ ェ ラ イ ツ 接合 ヘ ッ ド
使 用 テ ー プ	ノーマル・テープ, クローム・テープ, メタル・テープ
テ ー プ 速 度	4.75cm/sec.
モ ー タ ー 構 成	キャブスタン用 ; DD FG SERVO DC×1 リール用 ; DC×1
	ヘッドハウジングリフタ用 ; DC×1
操 作 方 式	ソフトタッチ・ロジック・コントロール方式
ワウ & フ ラッタ ー	0.022%以下 (W.R.M.S.)
巻 き 取 り 時 間	80秒以下 (C60にて, FF・REWとも)
周 波 数 特 性	20~23,000Hz (20~22,000Hz±2dB) ; メタルテープ 20~21,000Hz (20~20,000Hz±3dB) ; クローム・テープ 20~21,000Hz (20~20,000Hz±3dB) ; LHテープ
総 合 歪 率	1.0%以下 (LHテープ, 1kHz, 0dB) 0.5%以下 (Real Analyzed Distortion, LHテープ, 1kHz, 0dB)
S N 比	60dB以上 (ドルビーoff, JIS-A補正) ; メタル・テープ 67dB以上 (ドルビーB, CCIR補正) ; メタル・テープ 73dB以上 (ドルビーC, CCIR補正) ; メタル・テープ 58dB以上 (ドルビーoff, JIS-A補正) ; クローム・テープ 66dB以上 (ドルビーB, CCIR補正) ; クローム・テープ 73dB以上 (ドルビーC, CCIR補正) ; クローム・テープ 56dB以上 (ドルビーoff, JIS-A補正) ; LHテープ 64dB以上 (ドルビーB, CCIR補正) ; LHテープ 71dB以上 (ドルビーC, CCIR補正) ; LHテープ
入 力	ライン ; 100mV
出 力	ライン ; 550mV ヘッドホン ; 50mW/8Ω負荷
付 属 機 能	レコーディング・ミュート機能, オート・スペース機能, オート・リワインド機能, オート・ブレイ機能, フル・マニュアル・キャリブレーション, データ・メモリ機能, Peak/VU切替ニードル・メータ, マスター・フェーダ, タイマー録再機能, ドルビーNRシステム, リモート操作可能, ヘッドホン・ジャック, ピッチ・コントロール, Cue
電 源	AC100V (50Hz/60Hz)
消 費 電 力	30W
外 形 尺 度	460(幅)×158(高)×361(深)
重 量	11.0kg

\* ドルビーおよび□マークは、ドル  
ビー・ラボラトリーズ・インコー  
ポレーテッドの商標です。  
\* ドルビー・システムは、ドルビー・  
ラボラトリーズ・インコーポレー  
テッドの実施権に基づき製造され  
ています。